

HOUSING ACCESSIBILITY CHECKLIST

Based on Chapter 11A of the 2010 California Building Code



Prepared by:
Department of Housing and Community Development
Division of Codes and Standards
State Housing Law Program
11/1/2010

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INTRODUCTION

The Division of Codes and Standards in the Department of Housing and Community Development (HCD) is pleased to provide this Accessibility Checklist based on Chapter 11A of the 2010 California Building Code (CBC). The checklist is not intended to duplicate 100 percent of Chapter 11A. It was developed by HCD in response to a request by the California Commission on Disability Access (CCDA). The checklist is intended to be utilized as a supplemental tool for owners, builders, enforcing agencies, designers and other interested persons to assist with on-site inspection in an effort to increase compliance with residential accessibility requirements.

Owners, designers, industry professionals, the general public and other interested parties are encouraged to use the Accessibility Checklist as a reference guide; however, it should not be used in lieu of the code. It is recommended that the reader have an understanding of the California accessibility regulations in Chapter 11A and that this checklist be used in conjunction with the California Building Code.

Users of this checklist may find it beneficial to begin by reading the “Information About Using the Checklist” provided below and reviewing the “Abbreviations and Acronyms” list on the following page.

INFORMATION ABOUT USING THE CHECKLIST

This Accessibility Checklist follows the divisions established in Chapter 11A to the greatest extent possible; i.e., it starts at the exterior facilities, then proceeds through building features, dwelling unit features, and features common to the exterior and interior of buildings. Division I and Division VI have been omitted from this guide because they provide little benefit to the field user and consist of general provisions and requirements, which are typically reviewed during the plan review process.

Because the objective was to design this document as a checklist, each line typically will have one required element. This format is consistent throughout the guide with limited exceptions. HCD made a significant effort to provide complete sentences when possible. Changes and/or modifications that vary from the text contained in the code are made for clarity and convenience of the users. They are nonsubstantive and do not change the meaning or regulatory effect of the California Building Code.

For further information, a code section reference is provided at the end of each section and some subsections. The word “or” at the end of a requirement indicates that an alternative requirement will be listed on the next line. The word “and” at the end of a requirement indicates that an additional requirement will be listed on the next line. Some sections, common or similar to exterior, interior, and/or dwelling units, are combined for convenience, but the section numbers are shown for reference and identification.

Illustrations provided in this checklist generally are identical to the figures in Chapter 11A; however, some were modified to enhance clarity and provide specificity to the user. They are not intended to have a change in regulatory effect. The same figure numbers (and figure titles) used in Chapter 11A were utilized for ease of use and reference. Some illustrations are not found in the CBC, but are provided as an additional tool for better understanding the more difficult requirements. Those pictures do not have numbers listed below them.

ABBREVIATIONS AND ACRONYMS

(This list is provided for user convenience. Terms defined or explained further in the California Building Code and in this checklist are not included.)

1:2 slope	=	one unit vertical to 2 units horizontal
1:20 slope	=	one unit vertical to 20 units horizontal
1:12 slope	=	one unit vertical to 12 units horizontal
CBC	=	California Building Code
"	=	inch (es)
'	=	foot (feet)
#	=	number
WC	=	water closet
EXC.	=	Exception
o.c.	=	on center
w/	=	width
w/o	=	without
ISA	=	International Symbol of Accessibility

PARKING FACILITIES (1109A)

Each parking facility provided for covered multifamily dwellings and facilities (swimming pools, club houses, recreation areas, etc.) shall provide accessible parking. Parking facilities shall include, but not be limited to: Garages; Private garages; Carports; Off-street parking (parking lots/spaces).

Required accessible parking spaces: (1109A.3)

- ☐ At a minimum rate of 2% of the covered multifamily dwelling units.
- ☐ At least one space of each type of parking facility shall be accessible even if the total number exceeds 2%.
- ☐ One in every eight accessible spaces, but not less than one, shall be van accessible.

Assigned accessible parking spaces: (1109A.4)

- ☐ When provided, at least 2% shall be accessible in each type of parking facility; and
- ☐ At least one space of each type shall be accessible even if the total number exceeds 2%.
- ☐ Signage is not required for assigned parking.

Unassigned and visitor parking spaces: (1109A.5)

- ☐ When provided, at least 5% shall be accessible, with access to grade-level entrances; and
- ☐ Accessible spaces provided with signage not blocked from view by parked vehicles.

Location of accessible parking spaces: (1109A.7)

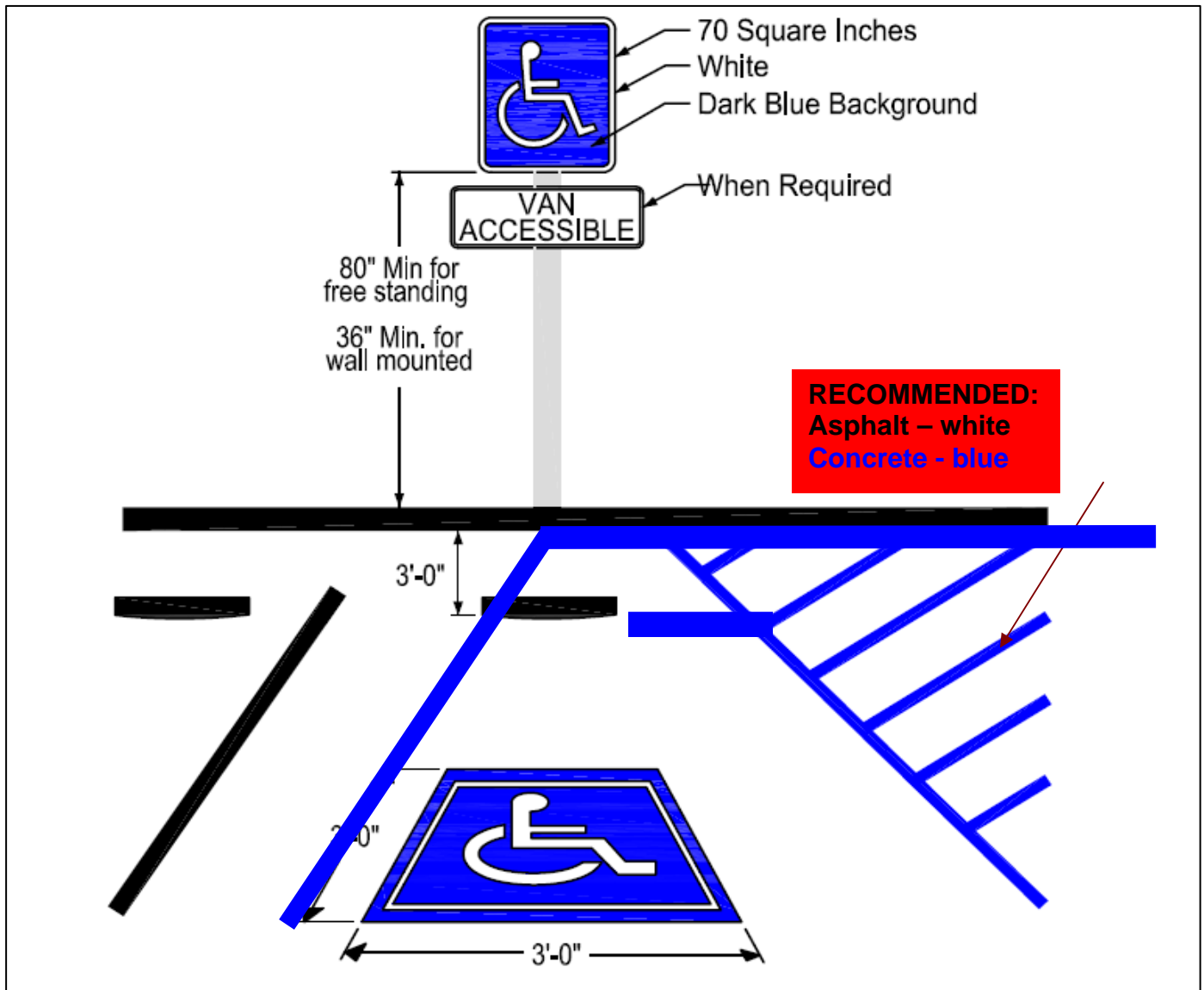
- ☐ On the shortest possible accessible route to accessible building or dwelling unit entrance.
- ☐ Dispersed near the accessible entrances if parking facilities are adjacent to a building with multiple accessible entrances.
- ☐ All van accessible spaces may be grouped on one level of a parking facility.
- ☐ When practical, the accessible route shall not cross lanes for vehicular traffic.
- ☐ When crossing is necessary, the accessible route shall be marked as a crosswalk.
- ☐ Parking facilities not serving a particular building: have accessible parking located on the shortest accessible route to an accessible entrance of the parking facility.
- ☐ Persons with disabilities shall not wheel/walk behind parked cars other than their own.
- ☐ **Vertical clearance:** 8 feet 2 inches from the floor to the lowest projection of the ceilings for entrances, exits, vehicular passageways to and from accessible parking. (1109A.8.1)
- ☐ **Surface slopes:** Not to exceed ¼" per foot (2.083 % gradient) in any direction. (1109A.8.3)

Identification of accessible parking spaces (Signage): (1109A.8.8)

- ☐ Reflective sign, adjacent to and visible from each parking space; and
- ☐ Consisting of the "International Symbol of Accessibility"; white on a dark blue background.
- ☐ Sign not smaller than 70 square inches; and
- ☐ 80" minimum from the bottom of the sign to the parking finished grade, when in a path of travel; or
- ☐ Centered on the wall at the interior end of the parking space, 36" minimum from the finished grade.
- ☐ "Van Accessible" sign below the symbol of accessibility for van accessible spaces.
- ☐ An additional sign posted in a conspicuous place at each entrance to off-street parking facilities or immediately adjacent to and visible from each accessible stall/space.
- ☐ Such sign not less than 17" x 22" with lettering 1" minimum in height, clearly stating the following:

"Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or license plates issued for persons with disabilities will be towed away at the owner's expense. Towed vehicles may be reclaimed at _____ or by telephoning _____"

(Blank spaces shall be filled with appropriate information as a permanent part of the sign.)



Identification of the surface of accessible parking spaces:

- ☐ Outlining the border (perimeter) of the parking space/stall in blue; or
- ☐ Painting the parking space/stall in blue.
- ☐ Outlining on the ground in white or suitable contrasting color the "International Symbol of Accessibility" ("ISA"); or
- ☐ Outlining the "International Symbol of Accessibility" in white on blue background.
- ☐ "ISA" - 36"x36" in size; visible to traffic enforcement officials when the vehicle is parked.

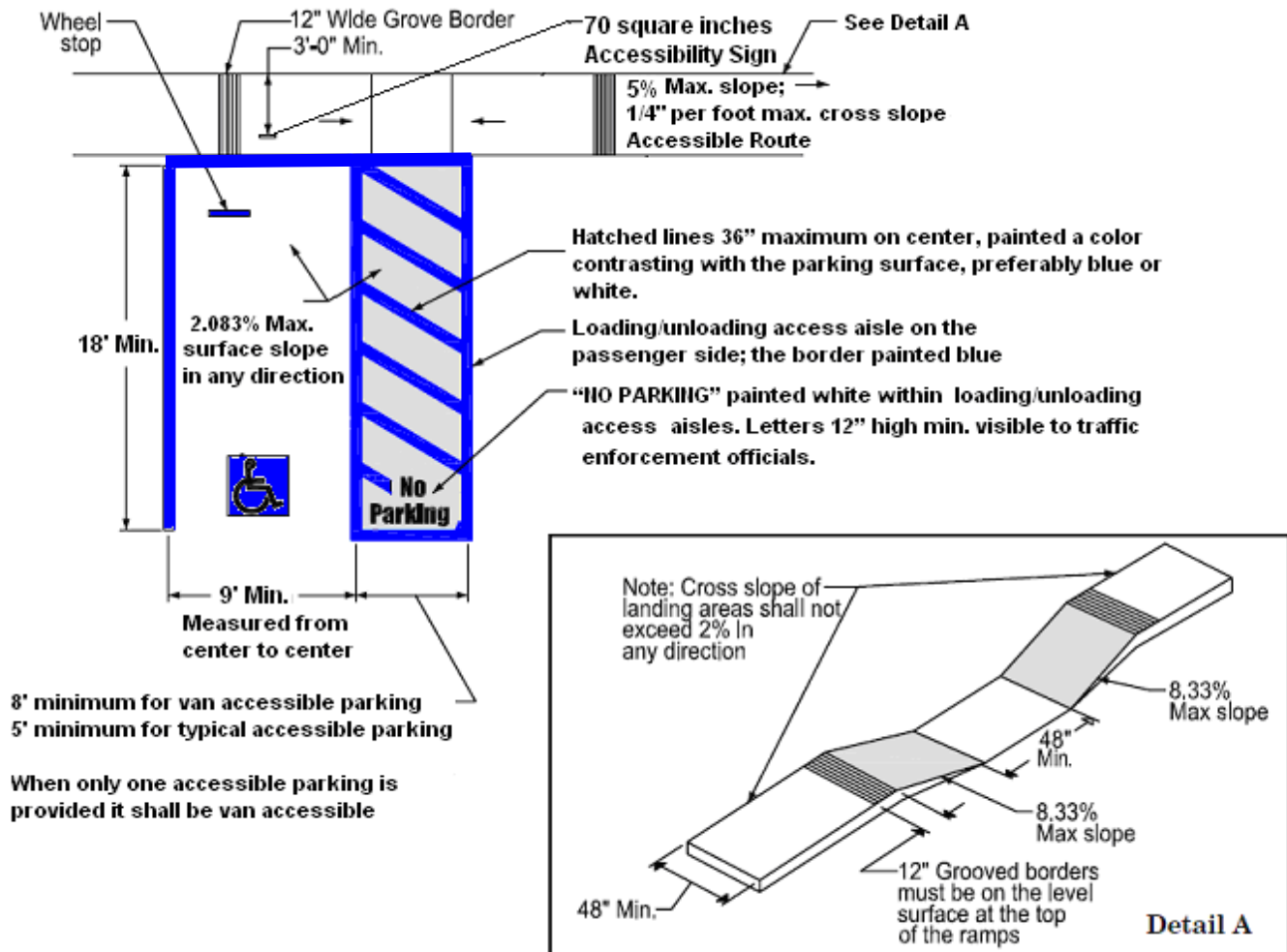
Striping requirements for loading/unloading access aisle:

- ☐ The perimeter of the loading and unloading access aisle painted blue.
- ☐ The hatched lines within the access aisle 36" o.c. maximum; and
- ☐ Painted a color contrasting with the parking surface, preferably blue or white.
- ☐ **"NO PARKING"** painted white within each (5 or 8 feet) loading/unloading access aisle.
- ☐ Letters 12" high minimum, visible to traffic enforcement officials.

NOTE: Asphalt is generally considered to be fairly dark in appearance. In order to provide a suitable contrasting color at the hatched area of the loading/unloading access aisle, a light color hatching must be used. In this case, white paint is preferable.

Concrete: In order to provide a suitable contrast where light concrete is used as the parking surface material, a dark color hatching must be used. In this case, blue paint is preferable.

Single Parking Stall



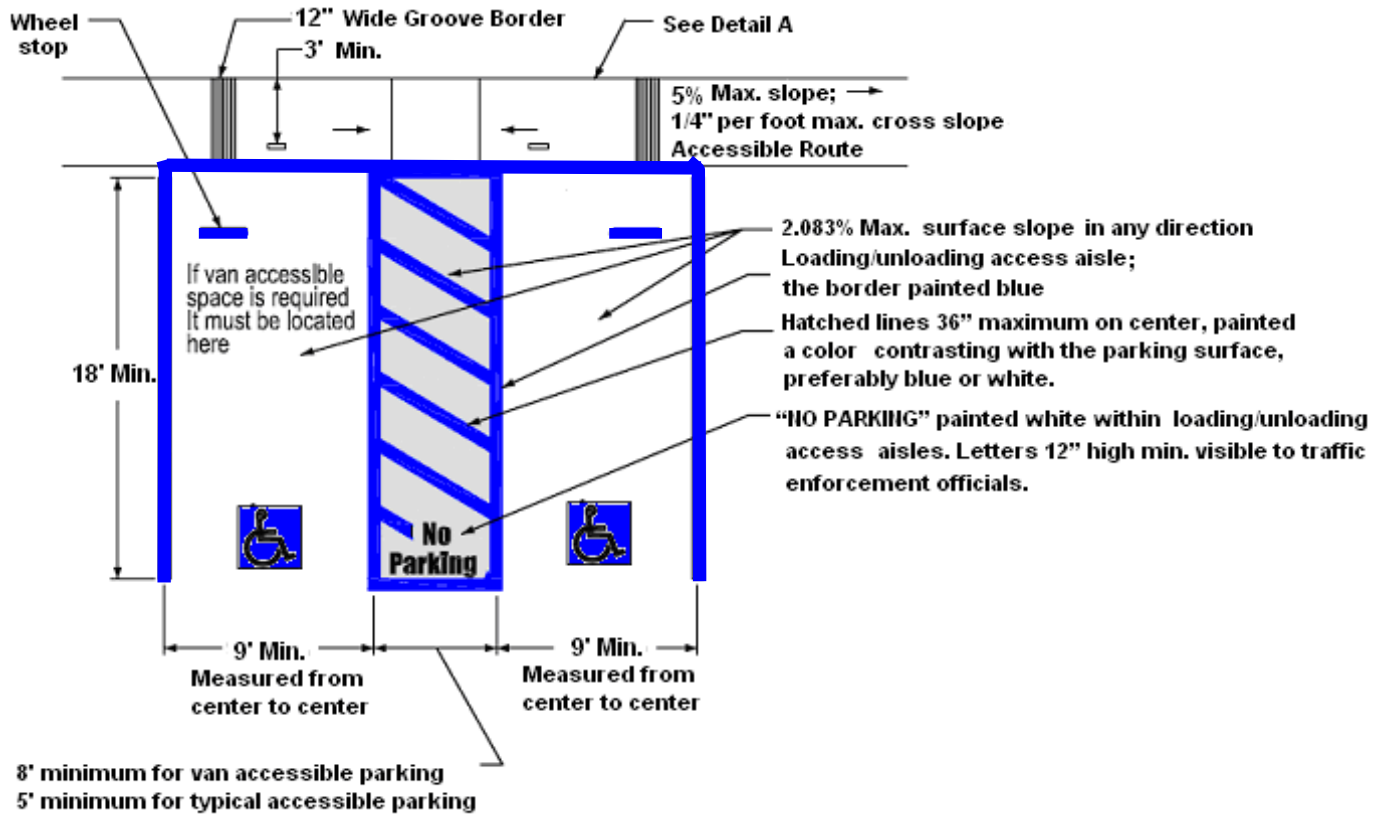
Arrangement and size of accessible parking spaces:

(1109A.8.5 & 1109A.8.6)

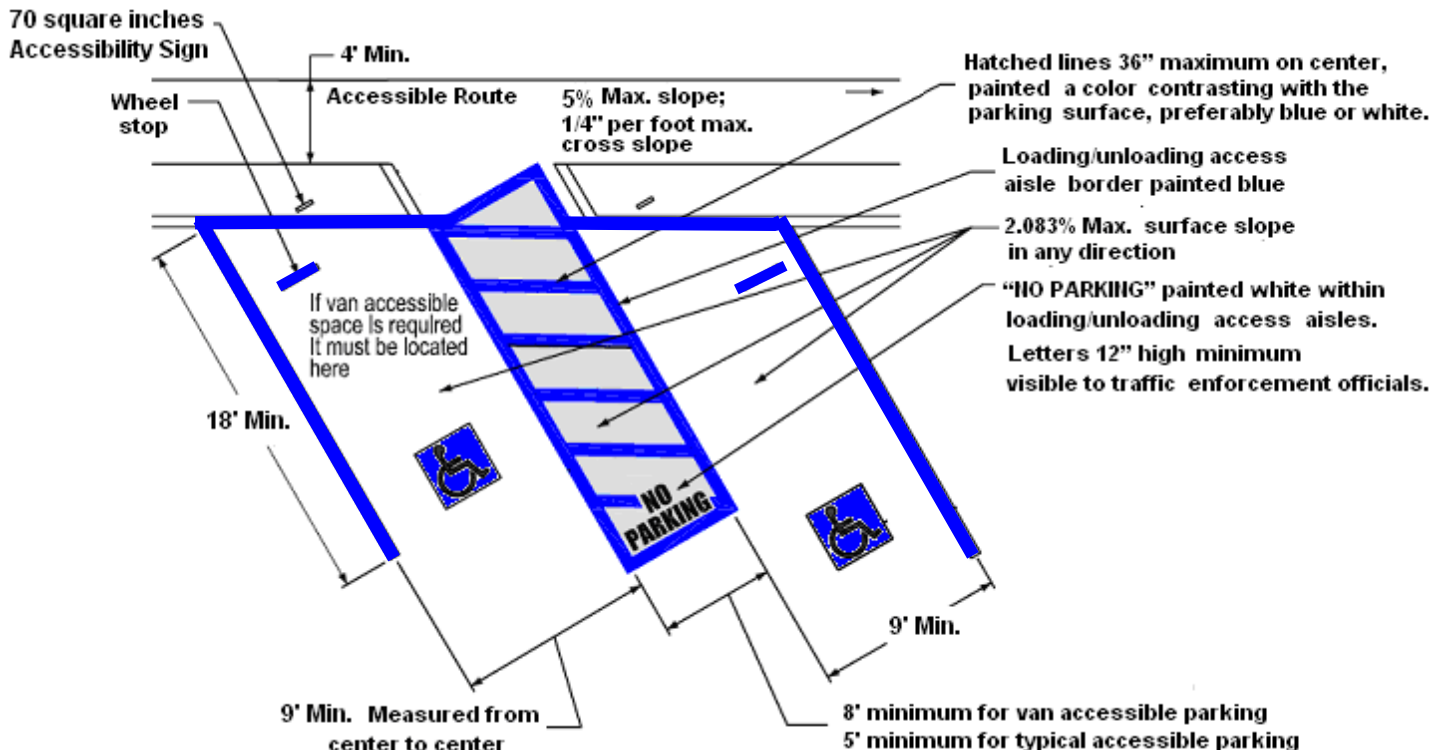
- ☐ 18 feet minimum length of each parking space.
- ☐ **Single spaces:** 14 feet wide, providing 9 feet parking area and 5 feet loading/unloading access aisle on the passenger side (vehicle parked in forward position).
- ☐ Two spaces may be combined within 23 feet: 9' parking on each side of 5' access aisle.
- ☐ **"Van accessible" parking:** 8 feet wide minimum loading/unloading access aisle, placed on the passenger side (vehicle parked in forward position).
- ☐ If van accessible and regular parking are next to each other, 8' wide access aisle is required.
- ☐ Parking adjacent to accessible parking not considered loading/unloading access aisle.
- ☐ A bumper/curb provided to prevent encroachment of cars over the required walkways.
- ☐ Accessible route is required from each parking space to related facilities, including curb cuts or ramps.
- ☐ Ramps, including curb ramps, not to encroach into any accessible parking space or adjacent loading/unloading access aisle.

(1109A.8.2)

Double Parking Stall



Diagonal Parking Stall



EXTERIOR ROUTES OF TRAVEL (1110A)

- ☐ Exterior accessible road: Provided to all portions of buildings, accessible entrances.
- ☐ Between buildings and public way.
- ☐ Accessible route is the most practical, direct, and to the maximum extent feasible, coincide with the route for the general public and building residents.
- ☐ Where more than one route of travel is provided, all routes shall be accessible.
- ☐ At least one accessible route is required from public transportation stops, accessible parking and passenger loading/unloading zones, and public streets/sidewalks to the accessible building entrance they serve.
- ☐ At least one accessible route shall connect accessible buildings, facilities, elements and spaces that are on the same site.
- ☐ Accessible routes between accessible buildings and accessible site facilities when more than one building or facility is located on a site.
- ☐ At least one accessible route shall connect accessible building or facility entrances with all accessible spaces, elements and covered multifamily dwelling units.
- ☐ An accessible route shall connect at least one accessible primary entrance of each covered multifamily dwelling unit with exterior spaces and facilities that serve the unit.
- ☐ Where elevators are provided, all elevators shall be accessible. (See Section 1124A)
- ☐ If carpet/carpet tile is used, it shall have firm backing or no backing.
- ☐ The maximum pile height is $\frac{1}{2}$ ".
- ☐ Exposed edges of carpet - fastened to floor and have trim along the entire length.
- ☐ Recessed doormats anchored to prevent interference with wheelchair traffic.
- ☐ At every primary public entrance and major junction where the accessible route diverges from the circulation path along or leading to an accessible route, entrance or facility, there shall be a sign displaying the "International Symbol of Accessibility."
- ☐ Signs indicating directions to accessible building entrances and facilities. (See Section 1143A)

CHANGES IN LEVEL ON ACCESSIBLE ROUTES (1111A; 1121A; 1131A)

- ☐ Abrupt changes in level along any accessible route not to exceed $\frac{1}{2}$ ".
- ☐ When changes do occur, shall be beveled with a slope no greater than 1:2 (50%).
- ☐ Changes in level not exceeding $\frac{1}{4}$ " may be vertical.
- ☐ Changes greater than $\frac{1}{2}$ " shall be made by means of a sloped surface not greater than 5% or a curb ramp (for exterior), ramp, elevator or wheelchair lift.
- ☐ Stairs shall not be part of an accessible route.
- ☐ Stairs along or adjacent to accessible routes: Section 1115A for exterior & Section 1123A for interior stairways.

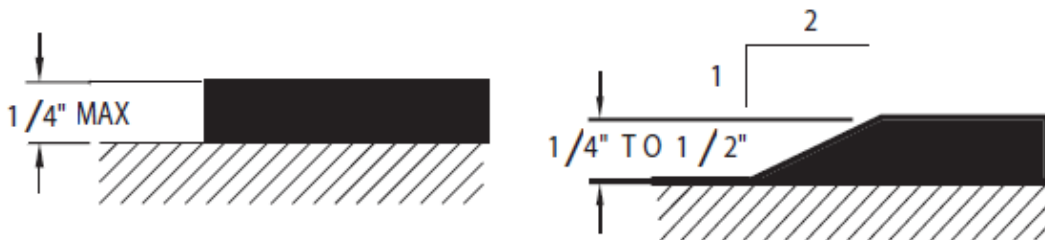


FIGURE 11A-1C (b & c)

NOTE: The requirements for changes in level on all accessible routes (exterior, interior and within covered multifamily dwellings) are combined for convenience.

CURB RAMPS ON ACCESSIBLE ROUTES (1112A)

- ☐ Constructed at each corner of street intersections and where a pedestrian way crosses a curb.
- ☐ Preferred/recommended location: in the center of the crosswalk of each street corner.
- ☐ Ramps located in the center of the curb return: street surfaces marked to identify pedestrian crosswalks, and the lower end of the curb ramp terminates within the crosswalk areas.
- ☐ Curb ramps 48" minimum wide; do not require handrails.
- ☐ Located or protected to prevent obstruction by parked cars.
- ☐ Built-up ramps not to project into vehicular lanes, parking or loading/unloading access aisles.
- ☐ If diagonal (or corner-type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow.
- ☐ The bottom of diagonal curb ramp has 48" minimum clear space.
- ☐ If provided at marked crossings, the 48" clear space shall be within the markings.
- ☐ Curb ramps with flared sides have 24" long minimum segment of straight curb located on each side of the curb ramp and within the marked crossing.

Slope of curb ramps:

(1112A.5)

- ☐ Not to exceed 1:12 (8.33%) and lie in a single sloped plane.
- ☐ Transitions from ramps to walks, gutters or streets flush and free of abrupt changes.
- ☐ Slopes of adjoining gutters, road surface immediately adjacent to the curb ramp or accessible route not to exceed 1:20 slope (5%) within 4 feet of the top and bottom of the curb ramp.
- ☐ Flared sides for ramps if pedestrians walk across: 1:10 (10%) maximum slope of the flare.
- ☐ Ramps with returned curbs may be used where pedestrians wouldn't normally walk across.

Level landing:

(1112A.6)

- ☐ 48" deep at the upper end of each ramp over its full width to permit safe egress; or
- ☐ The slope of the fanned or flared sides of the ramp not to exceed 1:12 slope (8.33%).

Finish:

(1112A.7)

- ☐ Surface of each curb ramp and its flared sides - stable, firm and slip-resistant; and
- ☐ Of contrasting finish from that of the adjacent sidewalk.

Grooved border; detectable warnings:

(1112A.8 & 1112A.9)

- ☐ 12" wide at the level surface of the sidewalk along the top and each side approximately $\frac{3}{4}$ ".
- ☐ All curb ramps between the face of the curb and the street shall have a grooved border at the level surface of the sidewalk.
- ☐ All curb ramps shall have detectable warnings. For details, see CBC, Chapter 11B, Section 1127B.5, Item 7.

NOTE: Details for curb ramps on accessible routes may be found on the figures.
(See pp. 7, 8 and 9)

Curb Details – Figures

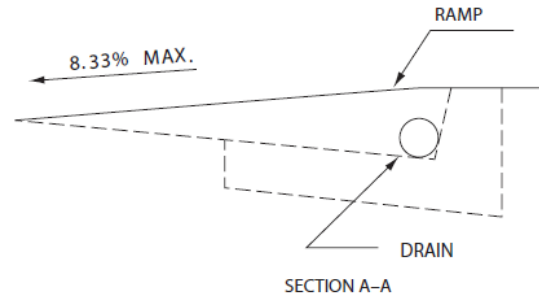
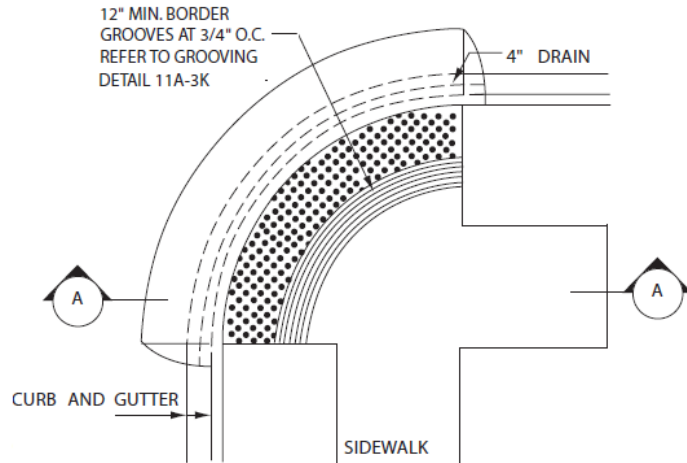


FIGURE 11A-3A

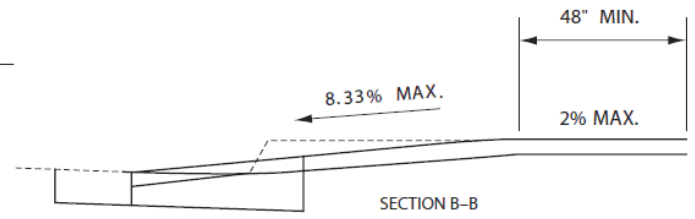
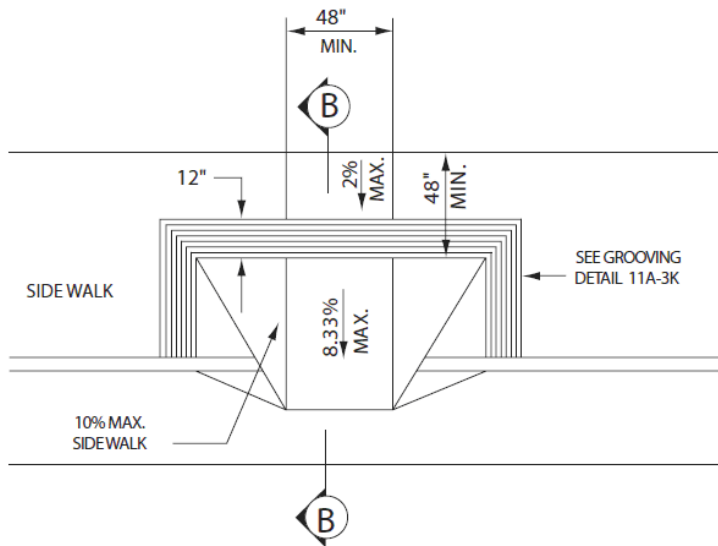


FIGURE 11A-3C

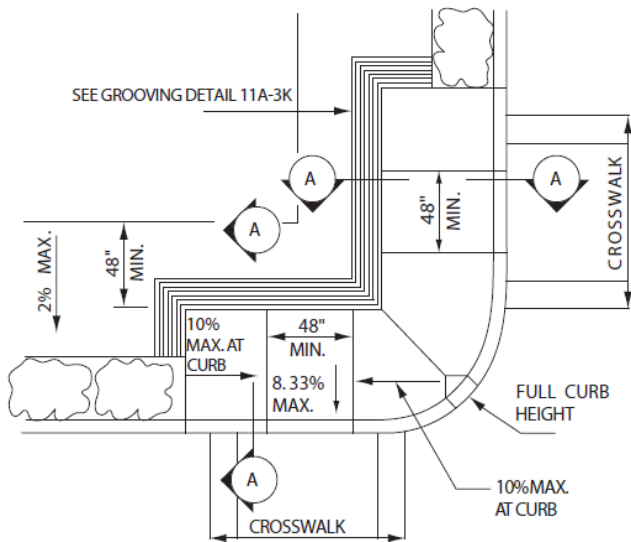


FIGURE 11A-3D

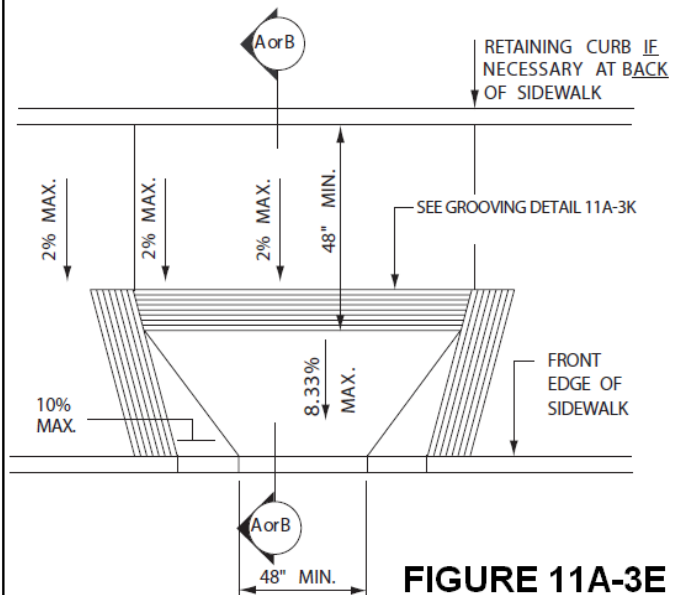


FIGURE 11A-3E

FIGURE 11A-3F

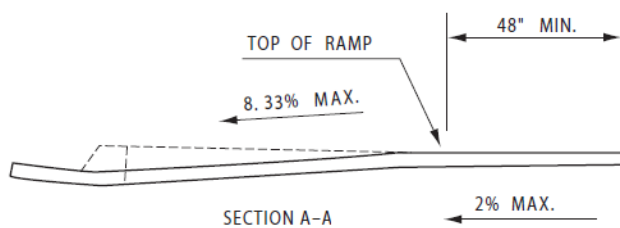
FIGURE 11A-3G

FIGURE 11A-3H

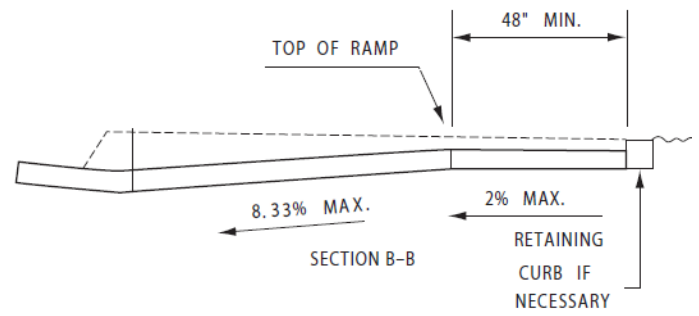
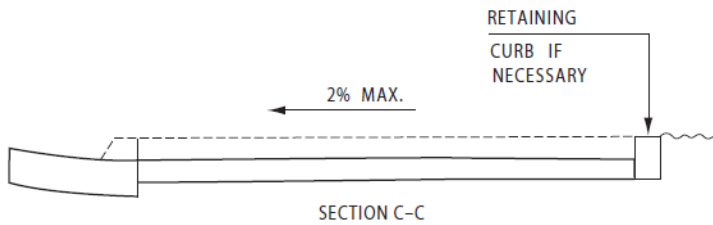
FIGURE 11A-3I

FIGURE 11A-3J

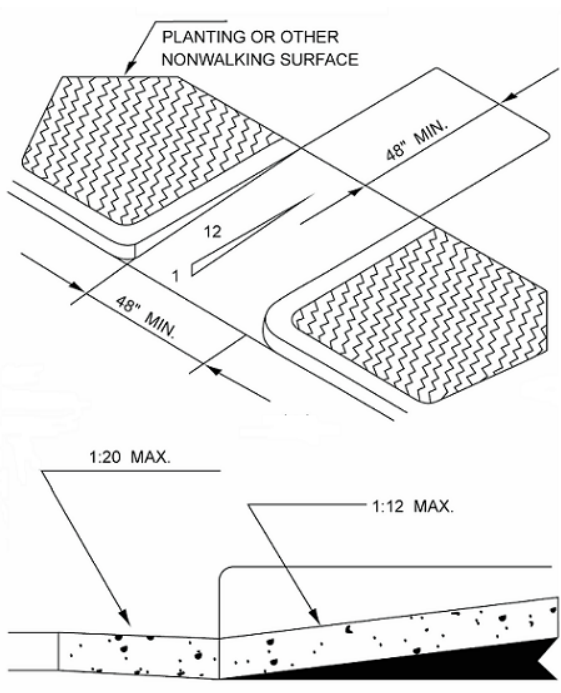
FIGURE 11A-3K



DEPRESS ENTIRE SIDEWALK AS REQUIRED



**FIGURE 11A-3L
CURB SECTIONS**



**FIGURE 11A-3M
Returned Curb Style**

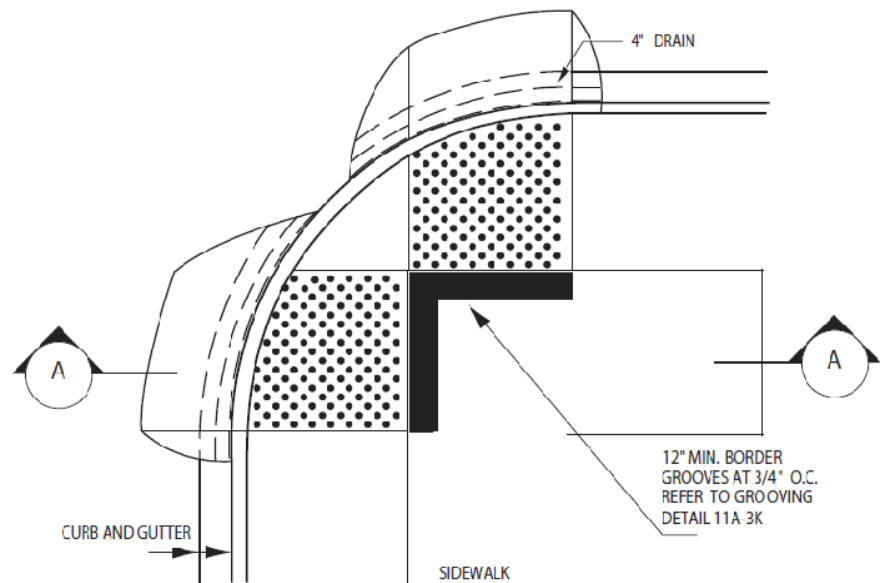


FIGURE 11A-3B

WALKS AND SIDEWALKS ON AN ACCESSIBLE ROUTE (1113A)

- ☐ 48" minimum width.
- ☐ Walks serving an individual dwelling unit may be reduced to 36" (except at doors).
- ☐ Details for sidewalk obstructions on Figure 11A-5A (p. 12).
- ☐ Walks/sidewalks have continuous common surface not interrupted by steps or by abrupt changes in level exceeding $\frac{1}{2}$ ". (See Section 1111A.3 & Figure 11A-1C (b & c) on p. 5)
- ☐ Slip resistant surfaces for slopes greater than 6%.
- ☐ Surfaces less than 6% slope: at least as slip-resistant as that described as a medium salted finish.
- ☐ Surface cross slopes not to exceed $\frac{1}{4}$ " per foot (2.083%).
- ☐ May be increased to $\frac{1}{2}$ " per foot (4.2%) for distances up to 20 feet (ask the enforcing agency).
- ☐ Level areas 60" minimum in length at intervals of 400 feet for walks with continuous gradients.
- ☐ If the slope in the direction of travel greater than 1:20 (5%), shall comply with ramp provisions.
- ☐ 60" x 60" minimum level area at doors/gates that swings toward the walk.
- ☐ Not less than 48" wide by 44" deep at doors/gates that swings away from the walk.
- ☐ Section 1126A.3.2 for strike edge maneuvering space at doors or gates.

NOTE: Details for smooth surface may be found in Section 1126A.7. (See p. 24)

RAMPS AND LANDINGS ON ACCESSIBLE ROUTES (1114A; 1122A)

NOTE: The requirements for exterior and interior stairways are combined for convenience.

- ☐ 60" minimum clear width for ramps serving accessible entrances to covered multifamily buildings where the ramp is the only exit discharge path, and the occupant load is 300 or more.
- ☐ Ramps may be 36" wide for occupant load of 10 or less.
- ☐ For all other ramps – 48" minimum clear width.
- ☐ Handrails, curbs, wheel guides and/or appurtenances shall not project into the required width.
- ☐ Water shall not accumulate on walking surfaces of outdoor ramps and ramp landings.
- ☐ Maximum slope no greater than 1:12 (8.33%).
- ☐ Transitions from ramps to walks, gutters or streets flush and free of abrupt changes.
- ☐ Cross slope of ramp surfaces not to exceed $\frac{1}{4}$ " per foot (2.083%).

Examples of ramp dimensions:

SLOPE (Grading %)	MAXIMUM RISE (Inches)	MAXIMUM HORIZONTAL PROJECTION (Feet)
1:12 (8.33%)	30	30
1:15 (6.67%)	30	37.5
1:16 (6.25%)	30	40
1:20 (5.00%)	30	50

Landings:

(1114A.4)

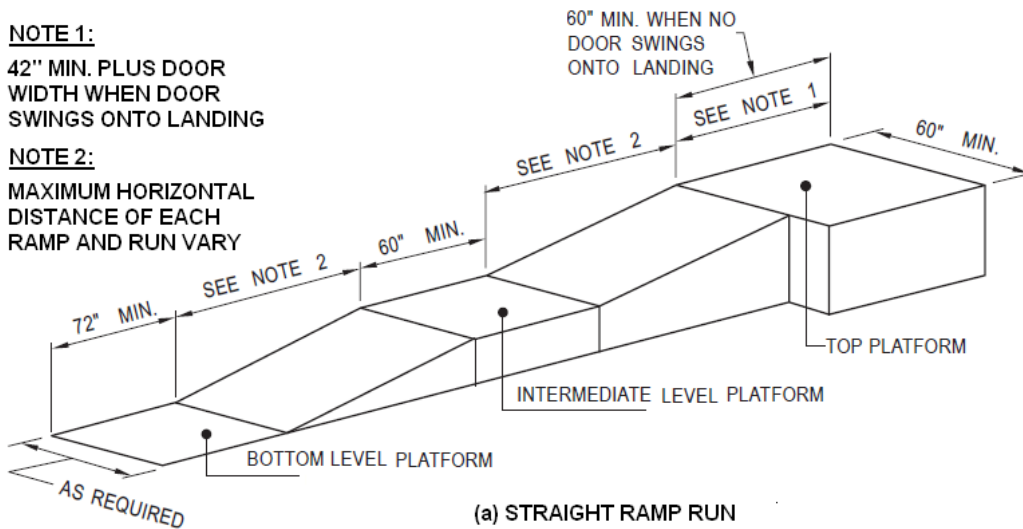
- ☐ Ramp landings shall be level.
- ☐ Landings provided at the top and bottom of each ramp.
- ☐ Intermediate landings at intervals maximum 30" of vertical rise and at each change of direction.
- ☐ Landings not considered in determining maximum horizontal distance of each ramp.
- ☐ Top landings not less than 60" wide; 60" minimum length in the direction of the ramp runs.
- ☐ Maneuvering clearance at doors. (See Section 1126A.3)
- ☐ Minimum width of bottom and intermediate landings not less than the width of the ramp.
- ☐ Doors in any position not to reduce the minimum dimension of landing to less than 42", and required width by more than 3" when fully open. (See Figure 11A-6D)
- ☐ Intermediate and bottom landings at a change of direction in excess of 30 degrees shall have a length in the direction of ramp run 72" minimum. (See Figures 11A-6C & 11A-6D)
- ☐ Other intermediate landings have a dimension in the direction of run 60" minimum. (See Figure 11A-6C)
- ☐ Ramp height: Continuous guardrails (from the top to the bottom of the ramp) for open ramps (one or both sides) more than 30" above adjacent floor/ground are required.

NOTE 1:

42" MIN. PLUS DOOR
WIDTH WHEN DOOR
SWINGS ONTO LANDING

NOTE 2:

MAXIMUM HORIZONTAL
DISTANCE OF EACH
RAMP AND RUN VARY



NOTE 1:

42" MIN. PLUS DOOR
WIDTH WHEN DOOR
SWINGS ONTO LANDING

NOTE 2:

MAXIMUM HORIZONTAL
DISTANCE OF EACH
RAMP AND RUN VARY

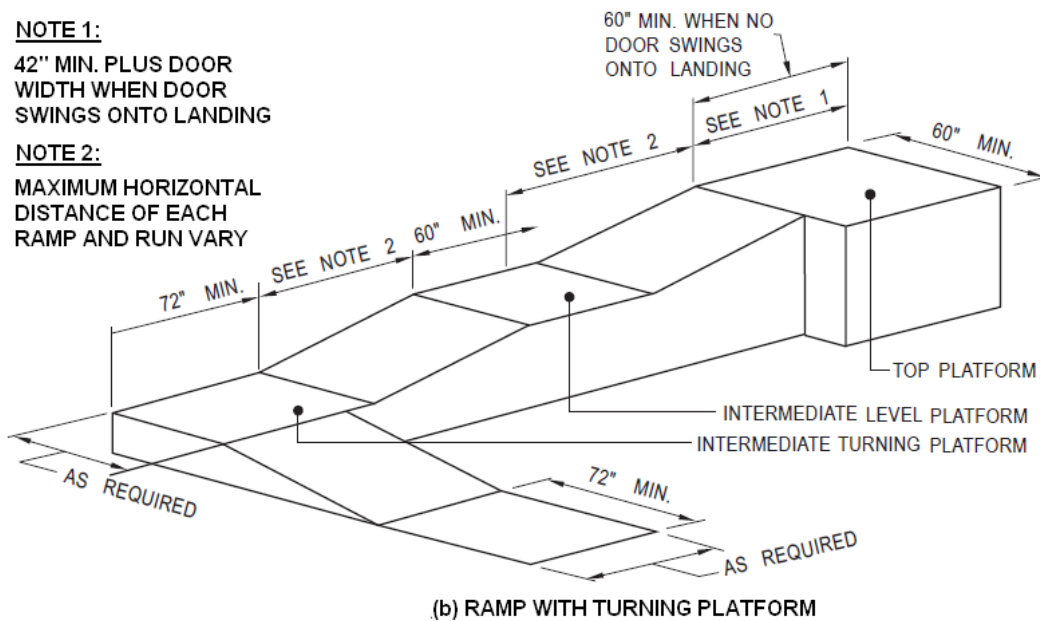


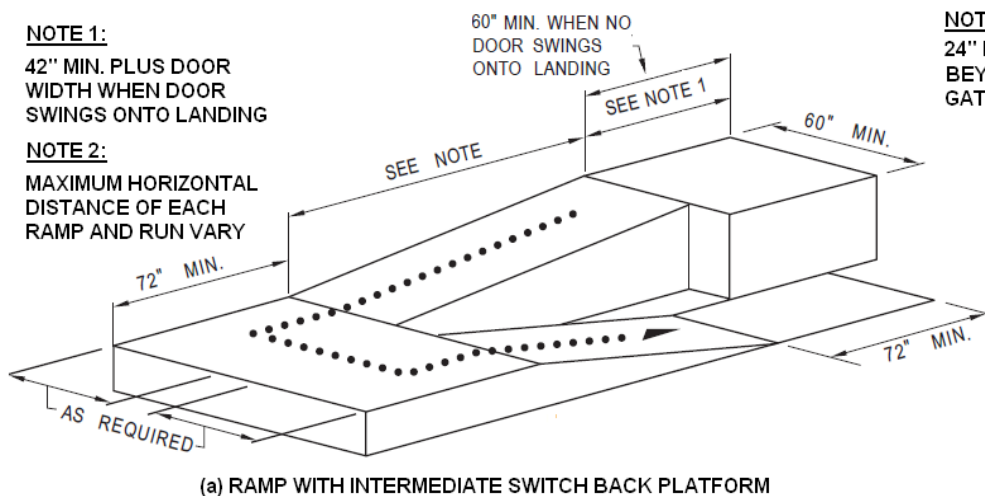
FIGURE 11A-6C—RAMP DIMENSIONS

NOTE 1:

42" MIN. PLUS DOOR
WIDTH WHEN DOOR
SWINGS ONTO LANDING

NOTE 2:

MAXIMUM HORIZONTAL
DISTANCE OF EACH
RAMP AND RUN VARY



NOTE 3:

24" MIN. EXTERIOR AND 18" MIN. INTERIOR
BEYOND THE STRIKE EDGE OF A DOOR OR
GATE ON THE SITE TOWARD WHICH IT SWINGS

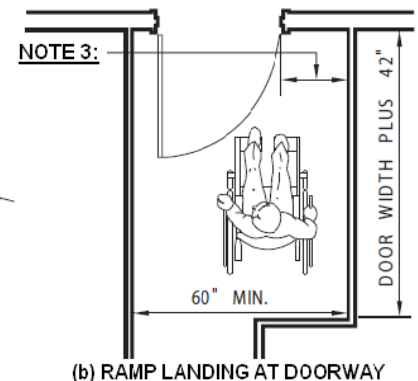


FIGURE 11A-6D - RAMP LANDING AND DOORWAY

Ramp handrails:**(1114A.6) & (Figures 11A-5A & 11A-6B)**

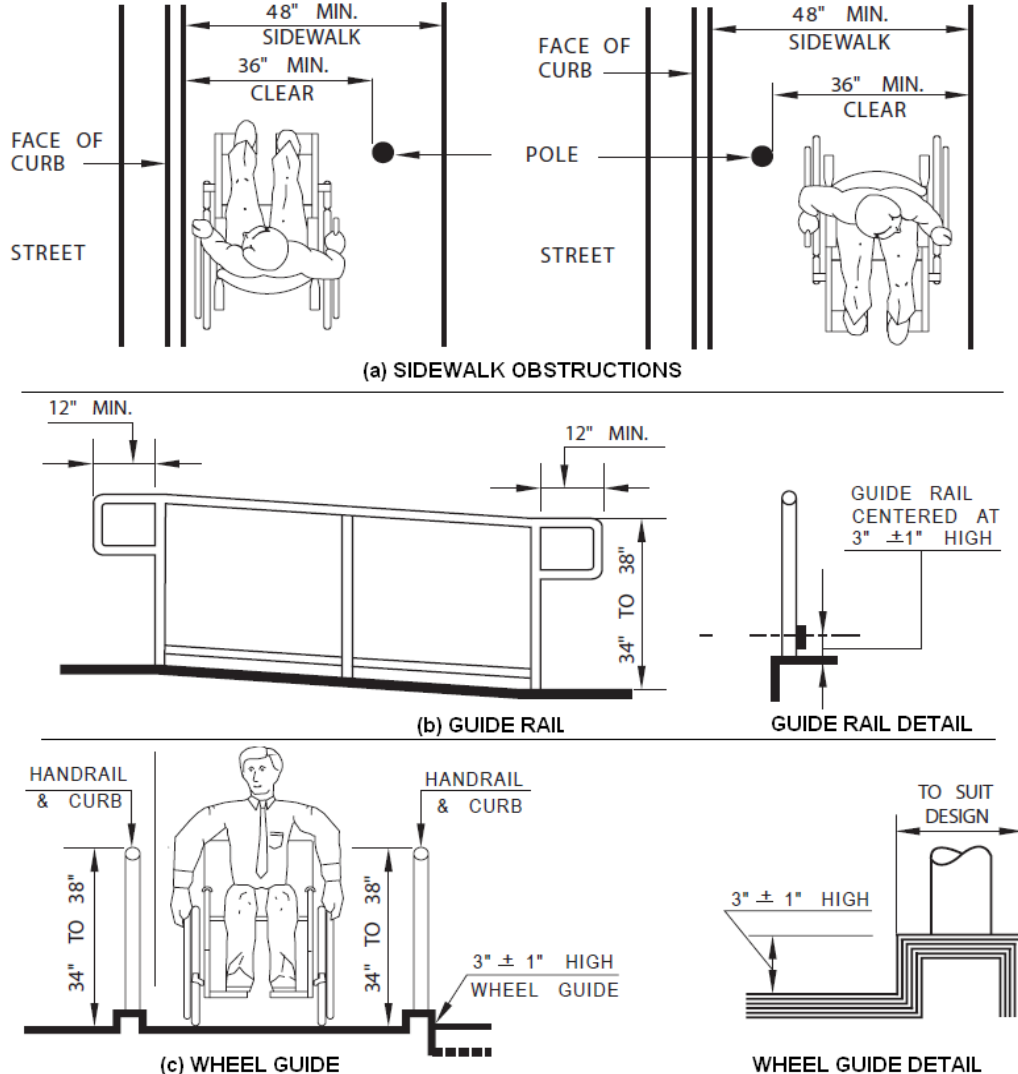
- ☐ Continuous handrails provided at each side of ramps when slope exceeds 1:20 (5%).

Exceptions: 1. *Curb ramps.*2. *Ramps at exterior door landings with less than 6" rise or less than 72" in length.*3. *Ramps serving a dwelling unit may have one handrail (on the open side(s) for open ramps)*

- ☐ The top of handrails 34" to 38" above the ramp surface.
- ☐ Handrail ends shall be returned.
- ☐ Handrails extend 12" minimum beyond the top and bottom of the ramp.
- ☐ If it creates a hazard, the termination shall be rounded/returned smoothly to floor, wall or post.
- ☐ 1½" space between the wall and the handrail for handrails projecting from a wall.
- ☐ Handrails shall not reduce the required clear width of ramps.
- ☐ Handrails may be located in a recess if it is 3" maximum deep and 18" minimum above the top of rail.
- ☐ Walls or other surfaces adjacent to handrails free of sharp or abrasive elements.
- ☐ Handrail grip has a smooth surface with no sharp corners.
- ☐ 1¼" - 2" cross-sectional dimension or equivalent gripping surface.
- ☐ Edges shall have a minimum radius of 1/8" and handrails shall not rotate within their fittings.

Curbs and wheel guides (ramps greater than 10' in length and landings with vertical drop greater than 4"):**(1114A.7)**

- ☐ Guide curbs a minimum of 2" in height at each side; or
- ☐ Wheel guide rails at each side, centered 2" to 4" above the surface of the ramp or landing.

Exception: *Ramps or ramp landings bounded by a wall or fence.***FIGURE 11A-5A - RAMPS AND SIDEWALKS**

STAIRWAYS (1115A & 1123A)

NOTE: The requirements for exterior and interior stairways are combined for convenience.

Open risers not permitted:

- ☐ **Exception for exterior:** Openings $\frac{1}{2}$ " maximum between the base of the riser and the tread; and risers constructed of grating containing openings $\frac{1}{2}$ " maximum may be permitted.
- ☐ **Exception for interior:** Stairways within an individual dwelling unit.
- ☐ All tread surfaces shall be slip resistant.
- ☐ Treads have smooth, rounded or chamfered exposed edges and no abrupt edges at nosing.
- ☐ Nosing not more than $1\frac{1}{2}$ " past the face of the riser below.
- ☐ Sloped risers or the underside of the nosing have an angle maximum 30 degrees from vertical.
- ☐ **Striping for visually impaired:** The upper approach and all treads (upper approach and only the lower tread for interior stairs), marked by a stripe providing clear visual contrast.
- ☐ Stripes 2"-4" wide, placed parallel to, and 1" maximum from the nose of the step or upper approach.
- ☐ Stripes extend the full width of the step or upper approach, and of material at least as slip resistant as the other treads of the stair.
- ☐ A painted stripe shall be acceptable (**striping not required for individual dwelling units.**)

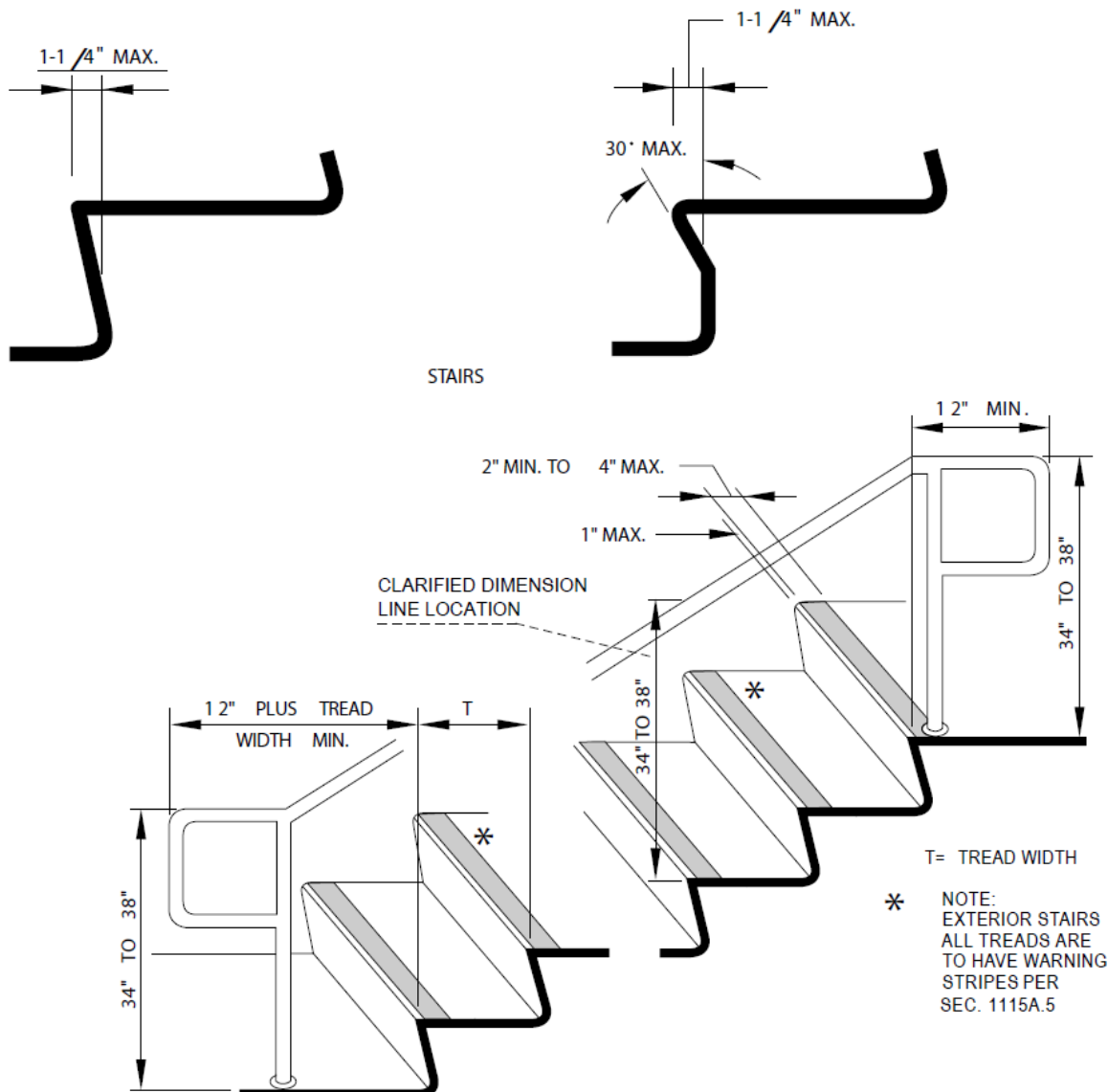


FIGURE 11A-6A—WARNING STRIPING AND HANDRAIL EXTENSIONS

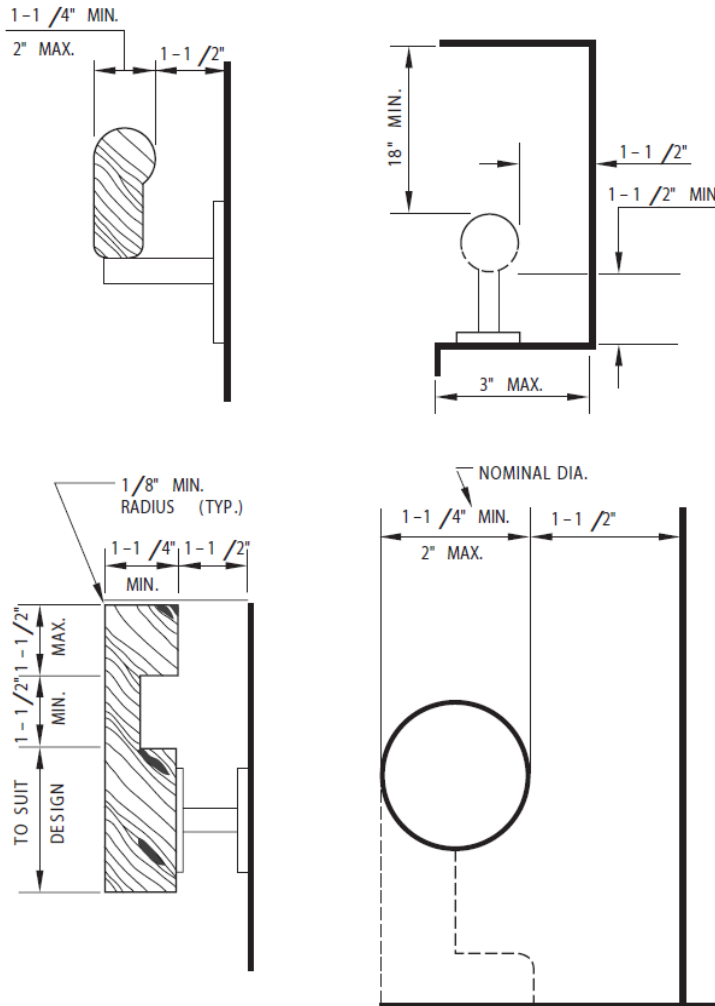
Stairway handrails:

(1115A.6)

- ☐ Handrails on each side of the stairways are required.
- ☐ Intermediate handrails located equidistant from the sides of stairways; and
- ☐ In addition shall comply with Section 1012.9.

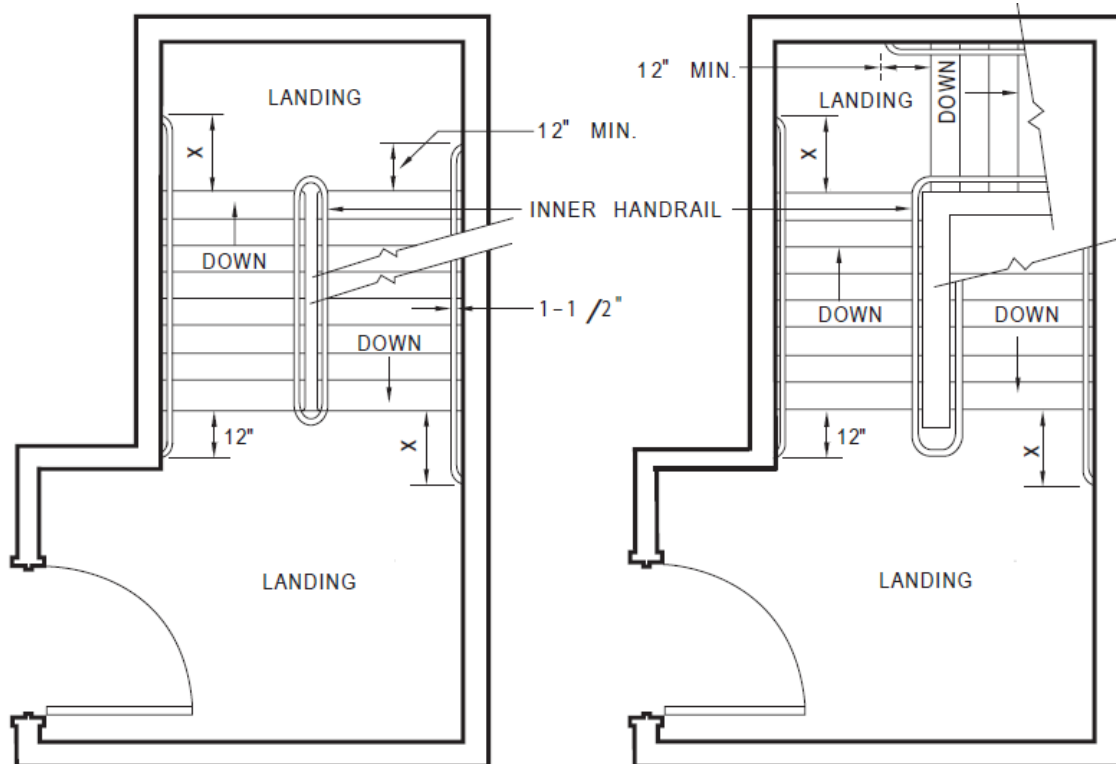
Exception:

- ☐ Stairways serving an individual dwelling unit may have one handrail; except
- ☐ Stairways open on one or both sides shall have handrails on the open side(s).
- ☐ The top of handrails shall be 34" to 38" above the nosing of the treads.
- ☐ Ends shall be returned or terminate in newel posts or safety terminals.



- ☐ Handrails extend 12" minimum beyond the top nosing; and 12" plus the tread width beyond the bottom nosing.
- ☐ If it creates a hazard, the termination shall be rounded/returned smoothly to floor, wall or post.
- ☐ Where stairs are continuous from landing to landing, the inner rail shall be continuous and need not extend out into the landing. (See Figures 11A-6A & 11A-6E)
- ☐ 1 1/2" between the wall and the handrail for handrails projecting from a wall.
- ☐ Handrails may be located in a recess if the recess is 3" maximum deep and extends 18" minimum above the top of the rail.
- ☐ Wall or other surface adjacent to handrails: free of sharp or abrasive elements.
- ☐ Handgrip portion of handrails between 1 1/4" and 2" in cross-sectional dimension; or the shape shall provide an equivalent gripping surface.
- ☐ The handgrip portion shall have a smooth surface with no sharp corners.
- ☐ 1/8" minimum radius for the edges.
- ☐ Handrails shall not rotate within their fittings.

FIGURE 11A-6B - STAIR HANDRAILS



NOTE: Inner handrail at landings of stairs that double back or immediately turn shall be continuous and shall not extend into landing or path of travel

X: Extension of handrail shall be equal to the tread width plus 12"

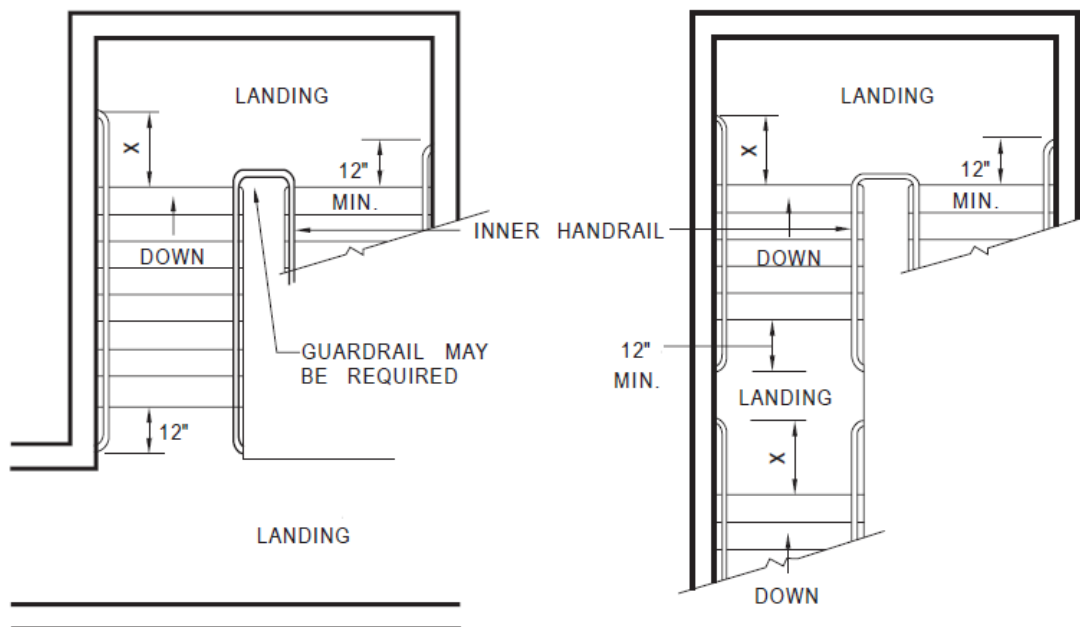


FIGURE 11A-6E - STAIR HANDRAILS

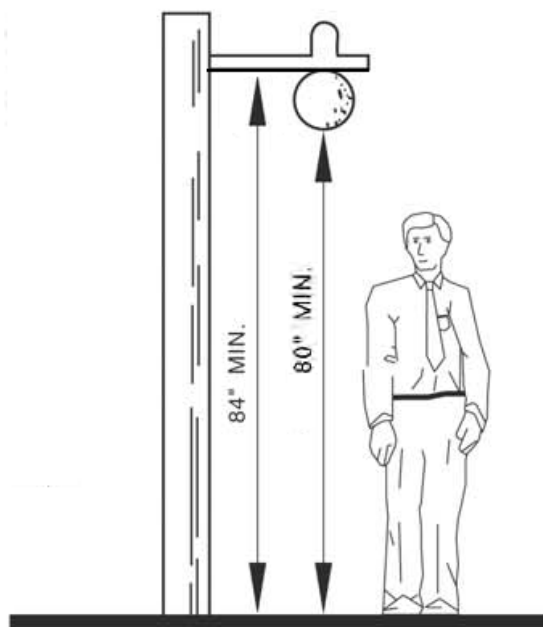
HAZARDS ON ACCESSIBLE ROUTES (1116A & 1125A)

NOTE: The requirements for hazards on exterior and on interior accessible routes are combined for convenience.

- Abrupt changes in level exceeding 4" shall be identified by curbs or other approved barriers projecting 6" minimum above the walk/sidewalk surface to warn the blind of a potential drop-off.

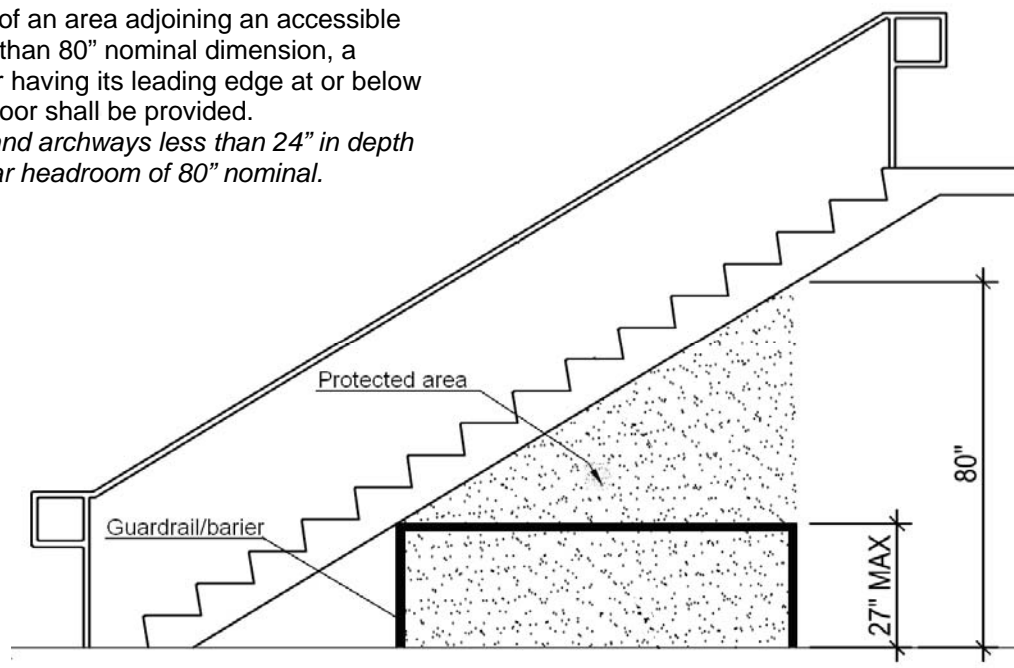
Exception:

- Between a walk or sidewalk and an adjacent street or driveway.
- When a guardrail or handrail is provided with a wheel guide centered 2" to 4" above the surface of the walk or sidewalk.



- 84" minimum clear headroom for walks, pedestrian ways, halls, corridors, and other circulation spaces part of the required egress system.
- 80" minimum for other walks, pedestrian ways and circulation spaces.
- Any obstruction overhanging pedestrian ways: 80" minimum above the walking surface, measured from the bottom of the obstruction.
- Where a guy support is used parallel to a path of travel, a guy brace, sidewalk guy or similar device shall be used to prevent an overhanging obstruction.
- If signs mounted on posts/pylons protrude from the posts/pylons, and the bottom edge of signs is less than 80" above the finished floor/ground, edges of such signs shall be rounded; the radius of corners minimum 1/8".

- If the vertical clearance of an area adjoining an accessible route is reduced to less than 80" nominal dimension, a guardrail or other barrier having its leading edge at or below 27" above the finished floor shall be provided.
- **Exception:** Doorways and archways less than 24" in depth may have minimum clear headroom of 80" nominal. (See Section 1126A)



BUILDING FEATURES

In addition, interior routes of travel shall also comply with Chapter 10.

General Requirements:

(1117A)

- ☐ When buildings are required to be accessible, building facilities shall be accessible.
- ☐ Where specific floors are required to be accessible, the requirements apply only to the facilities located on accessible floors.
- ☐ All primary entrances and exterior ground floor exit doors to buildings and facilities on accessible routes shall be accessible.
- ☐ When a ground-floor dwelling unit of a building has a separate entrance, each such unit shall be served by an accessible route.

Multiple entrances:

(1117A.4)

- ☐ Only one entrance to covered multifamily buildings is required to be accessible to any one ground floor, except where a dwelling unit has a separate exterior entrance.
- ☐ Where a building contains clusters of dwelling units with each cluster sharing a different exterior entrance, more than one entrance may be required to be accessible.
- ☐ Accessible entrances - on the accessible route to the covered dwelling units it serves.

Egress and areas of refuge

(1118A)

(See CBC, Chapter 10, Section 1007 for additional details)

INTERIOR ROUTES OF TRAVEL (1119A)

- ☐ When a building (or portion) is accessible or adaptable, an accessible route shall be provided to all portions of the building, accessible entrances and to covered dwelling units.
- ☐ The accessible route shall, to the maximum extent feasible, coincide with the route for the general public and other building residents.
- ☐ Accessible routes shall not pass through kitchens, storage rooms, restrooms, closets or other similar spaces except within an individual dwelling unit.
- ☐ Where more than one route of travel is provided, all routes shall be accessible.
- ☐ At least one accessible route shall connect accessible building or facility entrances with all accessible spaces, elements and covered multifamily dwellings.
- ☐ An accessible route shall connect at least one accessible primary entrance of each covered multifamily dwelling unit with interior and exterior spaces/facilities serving the unit.
- ☐ Where elevators are provided for vertical access, all shall be accessible.
- ☐ If carpet/carpet tile is used in common or public use areas on a ground or floor surface, it shall have firm backing or no backing; and
- ☐ The maximum pile height is ½ inch; and
- ☐ Exposed edges shall be fastened to floor surfaces, with trim along the length of the edge.
- ☐ Carpet edge trim comply with the requirements for change in level. *(See Section 1111A)*
- ☐ Recessed doormats adequately anchored to prevent interference with wheelchair traffic.

CHANGES IN LEVEL ON ACCESSIBLE ROUTES (1121A)

The requirements for changes in level on all accessible routes (exterior, interior and within covered multifamily dwellings) are combined for convenience. (See p. 5)

INTERIOR RAMPS AND LANDINGS ON ACCESSIBLE ROUTES (1122A)

The requirements for exterior and interior ramps are combined for convenience. (See p. 10)

INTERIOR STAIRWAYS (1123A)

The requirements for exterior and interior stairways are combined for convenience. (See p. 13)

INTERIOR ACCESSIBLE ROUTES (1120A)

Widths:

(1120A.1)

- ☐ 44" minimum for accessible routes serving an occupant load of 10 or more.
- ☐ 36" minimum for routes serving an occupant load of less than 10.
- ☐ For turns around a corner or an obstruction, details on Figure 11A-1C.

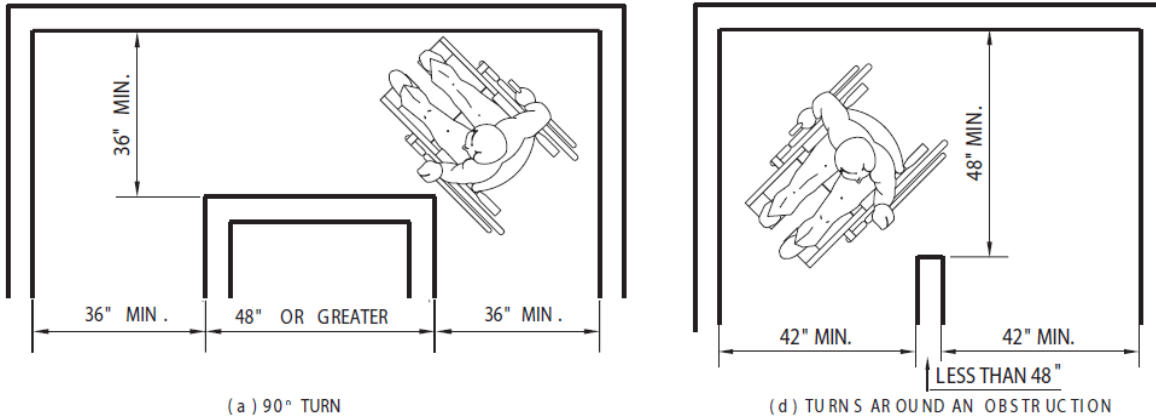


FIGURE 11A-1C - WIDTH OF ACCESSIBLE ROUTE

Accessible routes over 200 feet in length:

(1120A.2)

- ☐ Have 60" minimum clear width; or
- ☐ 60" x 60" minimum turning space or passing alcove at central location; or
- ☐ 44" minimum in width intervening cross or tee. (See Figure 11A-1L)

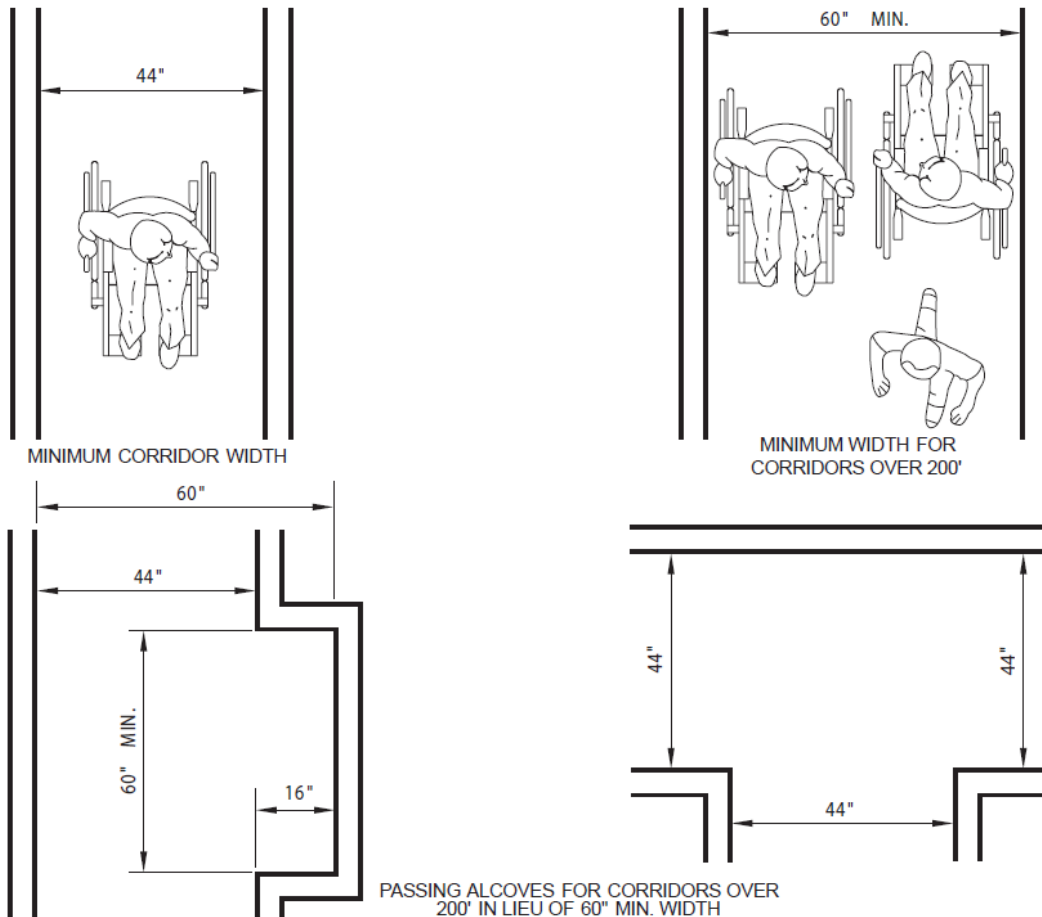


FIGURE 11A-1L—CORRIDOR OVER 200 FEET

ELEVATORS AND PLATFORM (WHEELCHAIR) LIFTS (1124A)

- ☐ Elevators provided in covered multifamily buildings shall be accessible.
 - ☐ **Exception:** *Private elevators serving only one dwelling unit.*
- ☐ Passenger elevators shall be located on a major accessible route.
- ☐ Remain accessible and usable at all times that the building is occupied.

Size of cab and control locations:

(1124A.3)

- ☐ Elevators serving covered multifamily buildings shall be sized to accommodate a wheelchair.
 - ☐ **Exception:** *Equivalent facilitation approved by the enforcing agency.*
- ☐ The car inside shall allow for the turning of a wheelchair.
- ☐ Minimum clear distance between walls or between wall and door, excluding return panels, not less than 80" x 54" for center-opening doors, and 68" x 54" for side-slide opening doors.
- ☐ Minimum distance from wall to return panel not less than 51".
- ☐ Elevator doors shall provide 36" minimum clear width.

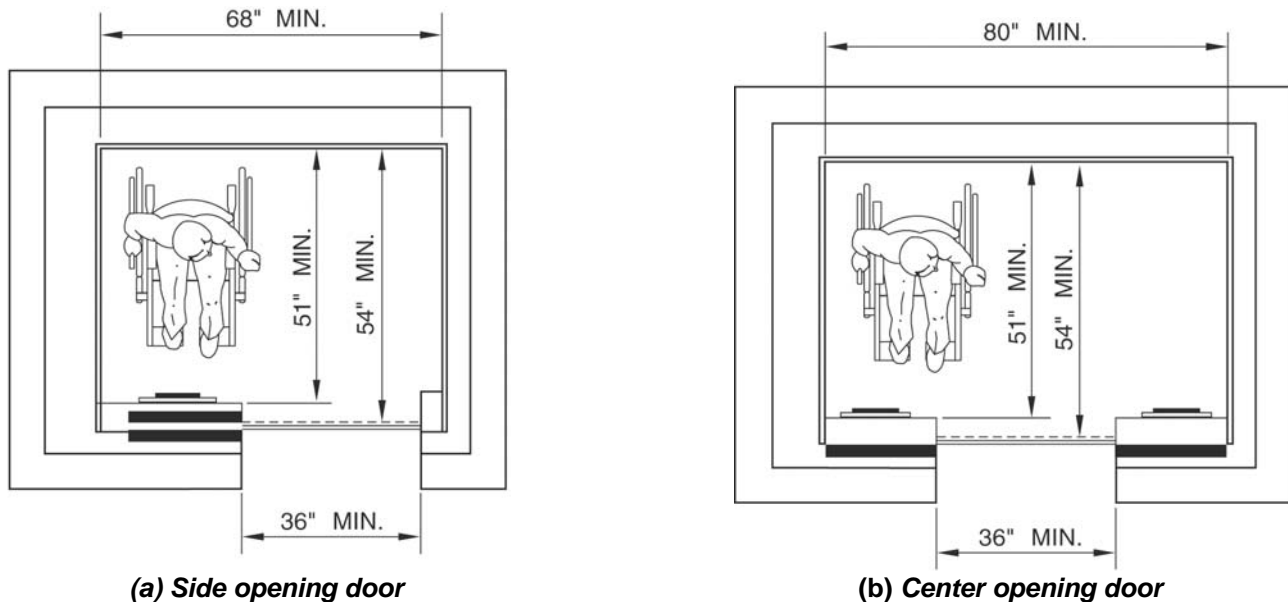


FIGURE 11A-7A—MINIMUM DIMENSIONS OF ELEVATOR CARS

- ☐ Elevator floor buttons within 54" above finish floor for side approach; 48" for front approach.
- ☐ Except for photoelectric tube bypass switches, emergency controls shall be grouped in or adjacent to the bottom of the panel, no lower than 35" from the floor.
- ☐ For multiple controls, only one set must comply with these height requirements.
- ☐ Floor buttons shall be with visual indicators to show when each call is registered.
- ☐ The visual indicators shall be extinguished when each call is answered.
- ☐ Where possible, 48" maximum height for elevator floor buttons is preferred.
- ☐ Elevator car controls: $\frac{3}{4}$ " minimum dimension, raised $\frac{1}{8}$ " \pm $\frac{1}{32}$ " above the surrounding surface.
- ☐ Control buttons shall be illuminated, with square shoulders, and activated by a mechanical motion that is detectable.
- ☐ Designated by $\frac{5}{8}$ " minimum raised characters/symbols immediately to the left of the control button.
- ☐ Braille symbols located immediately below the numeral, character or symbol.
- ☐ $\frac{3}{8}$ " minimum clear space or other means of separation between rows of control buttons.
- ☐ The raised characters and symbols: white on a black background.
- ☐ Call button for main entry floor: designated by a raised star at the left of the floor designation.
- ☐ The emergency telephone handset 48" maximum above floor; the handset cord 29" minimum in length.
- ☐ If the telephone system is located in a closed compartment, the compartment door hardware shall be a lever type conforming to the provisions of Section 1126A.6.1. (See Section 1126A.6 on p. 24)
- ☐ Emergency intercommunication shall not require voice communication.

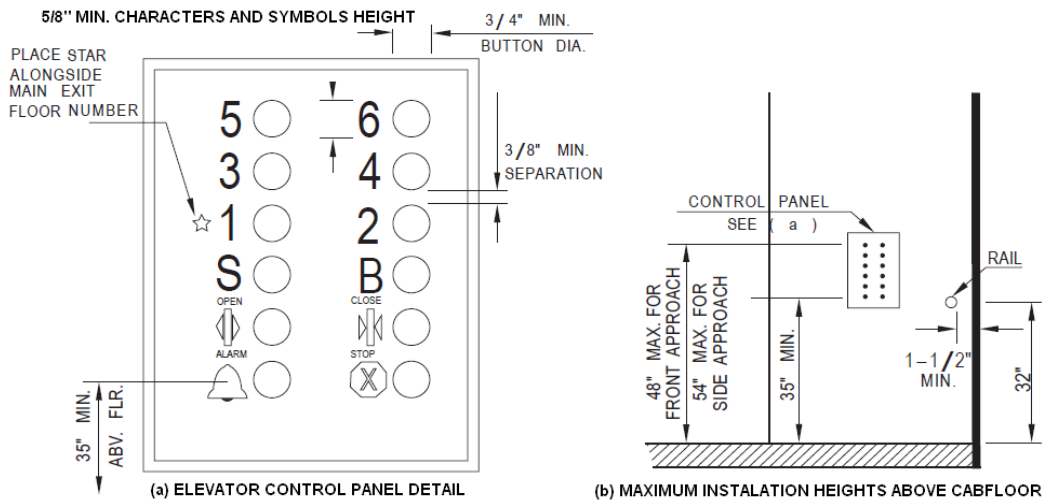


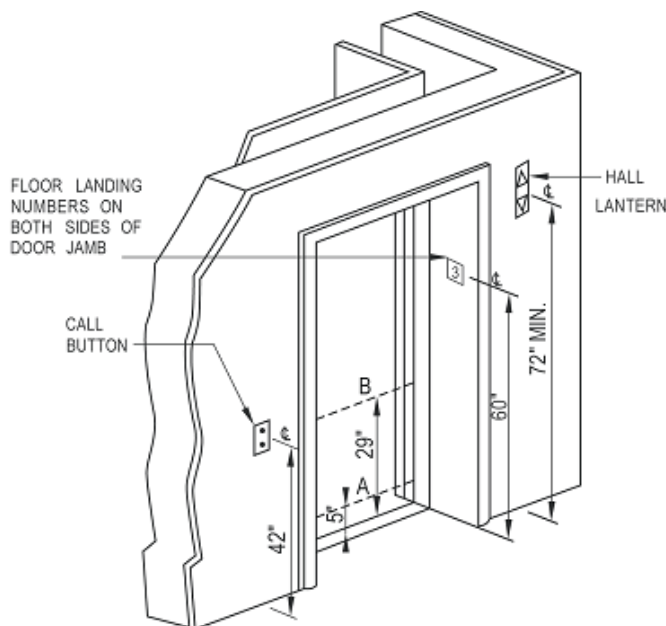
FIGURE 11A-7B—ELEVATOR CONTROL PANEL

Hall call buttons:

(1124A.4)

- ☐ Call operation buttons centered 42" above the floor; and
- ☐ 3/4" minimum in size, raised 1/8" +/- 1/32" above the surrounding surface.

- ☐ The button designating the "Up" direction is on the top.
- ☐ Visual indication provided to show each call registered and extinguished when answered.
- ☐ Objects adjacent to, and below, hall call buttons, project maximum 4" from the wall.



Doorjamb marking:

(1124A.8)

- ☐ Elevator hoistway entrances shall have raised floor number designations on both jambs.
- ☐ Characters shall be raised Arabic numerals 2" minimum in height with raised Braille symbols placed below the corresponding raised characters.
- ☐ Raised characters on contrasting background; the centerline 60" from the floor.
- ☐ On grade level, a raised five-pointed star placed to the left of the raised character.
- ☐ The star shall have 2" outside diameter.

NOTE:

The automatic door reopening device is activated if an object passes through either line A or line B. Line A and line B represent the vertical location of the door reopening device not requiring contact.

NOTE: Details for Braille symbols in CBC, Sections 1117B.5.5 & 1117B.5.6.

**FIGURE 11A-7C
HOISTWAY AND ELEVATOR ENTRANCES**

Details for the sections below can be found in CBC, Chapter 11A:

Minimum illumination (Section 1124A.5); Minimum door delay (Section 1124A.7); Door protective & reopening devices (Section 1124A.9); Operation and leveling (Section 1124A.10); Special access (wheelchair) lifts (Section 1124A.11).

HAZARDS ON ACCESSIBLE ROUTES (1125A)

NOTE: The requirements for hazards on exterior and on interior accessible routes are combined for convenience. For details, see p. 16.

DOORS (1126A)

Width/height of doors providing access to common use areas or dwelling units: (1126A.1)

- ☐ Not less than 36" in width, and not less than 80" in height.
- ☐ Minimum 32" clear opening, measured with the door positioned at 90 degrees from closed position.
- ☐ Doors capable of opening at least 90 degrees.
- ☐ A pair of doors shall have at least one leaf providing 32" minimum clear width.
- ☐ The width of any component in egress system not less than the minimum required by Section 1005.
- ☐ Revolving doors shall not be used as required entrances for persons with disabilities.

Level floor or landing:

(1126A.2)

- ☐ The floor or landing on each side of an exit door shall be level; and
- ☐ Not more than $\frac{1}{2}$ " lower than the top of the threshold of the doorway. (See Figure 11A-8I)
- ☐ Changes in level between $\frac{1}{4}$ " and $\frac{1}{2}$ " beveled with 1:2 (50%) maximum slope.
- ☐ Changes in level $> \frac{1}{2}$ " shall be accomplished by means of a ramp.

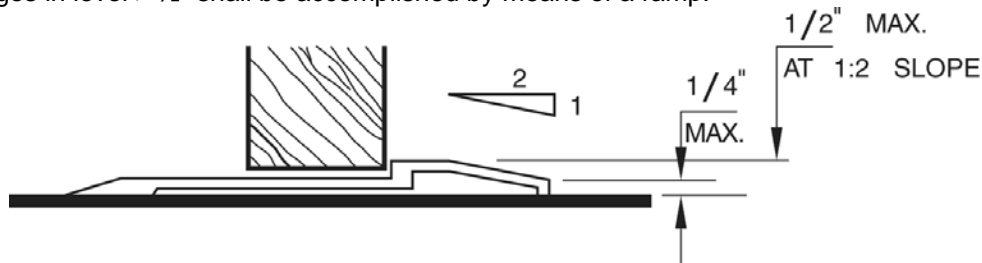


FIGURE 11A-8I—THRESHOLDS

Maneuvering clearances at doors:

(1126A.3)

- ☐ The level floor/landing of an exit door - 60" minimum length in the direction, and 44" minimum length opposite the direction of the door swing.
- ☐ The width of the level area on the side to which the door swings extend 24" minimum past the strike edge for exterior doors and 18" minimum past the strike edge for interior doors.
- ☐ 24" is preferred for strike-side clearance.

Swinging doors with front approach:

- ☐ **Pull side approach:** the level floor/landing extends 60" minimum in the direction of door swing.
- ☐ **Push side approach:** the level floor/landing extends 48" minimum opposite the direction of swing.
- ☐ **Doors with push side approach having both a closer and a latch:** provided with clear and level area extending 12" minimum past the strike edge on the approach side door.

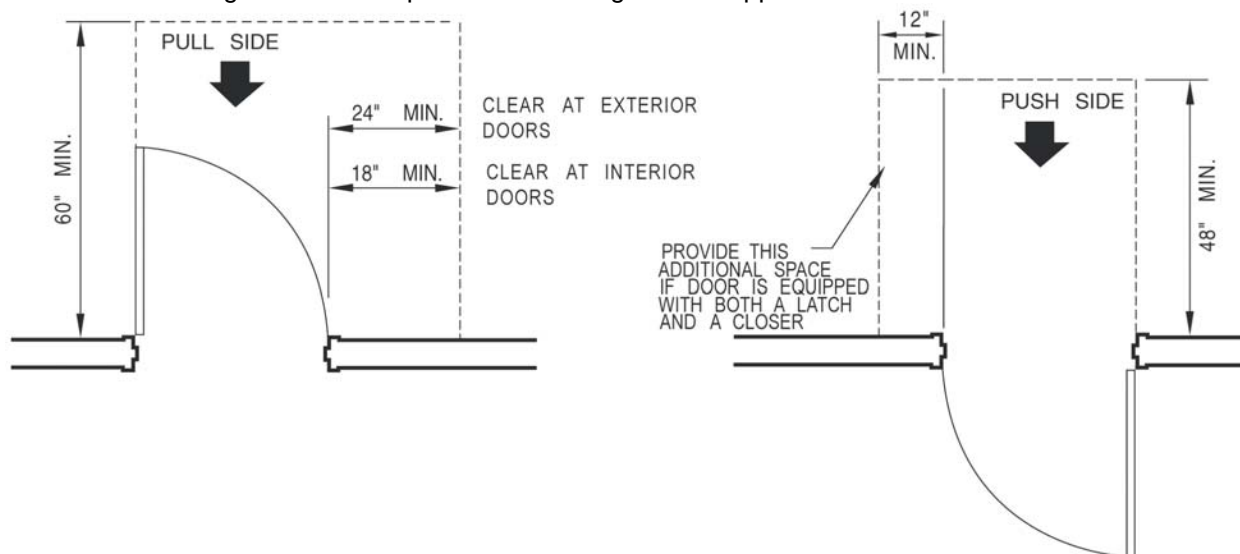


FIGURE 11A-8A- FRONT APPROACHES – SWINGING DOORS

Swinging doors with hinge side approach:

- ☐ **Pull side approach:** provided with a level floor/landing 60" minimum in depth.
- ☐ A clear and level area extends 36" minimum past the strike edge on the approach side of the door.
 - ☐ **Exception:** Doors with level floor/landing greater than 60" shall be provided with a clear and level area at least 24" past the strike edge for exterior doors and 18" past the strike edge for interior doors.
- ☐ **Push side approach:** provided with level floor/landing minimum 44" in depth, and a clear and level area extending 54" minimum from the strike edge of the door jamb past the hinge side of the door.
- ☐ **Doors with latch and closer:** level floor/landing minimum 48" deep at the push side of door.

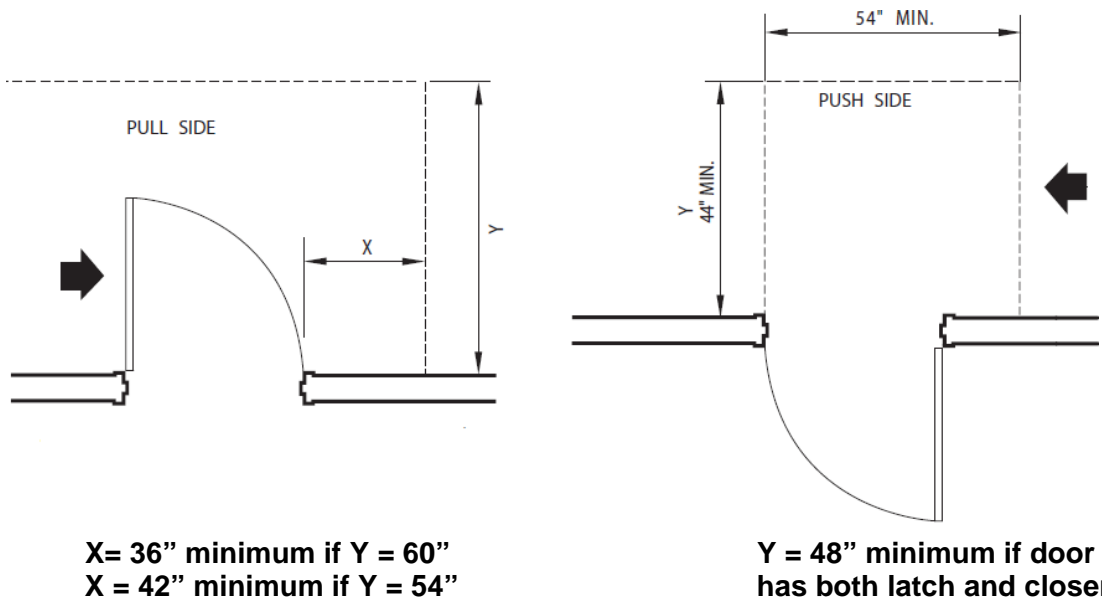


FIGURE 11A-8B—HINGE-SIDE APPROACHES—SWINGING DOORS

Swinging doors with latch side approach:

- ☐ **Pull side approach:** have a level floor/landing not less than 60" in depth, and provided with a clear and level area extending 24" minimum past the strike edge on the approach side of the door.
 - ☐ **Exception:** Doors serving individual covered multifamily dwellings shall have a 44" minimum landing depth; doors with a closer shall have a 54" minimum landing depth.
- ☐ **Push side approach:** have a level floor/landing 44" minimum in depth, and provided with a clear and level area extending 24" minimum past the strike edge on the approach side of the door.
- ☐ **Doors with a closer:** level floor/landing not less than 48" deep at the push side of the door.

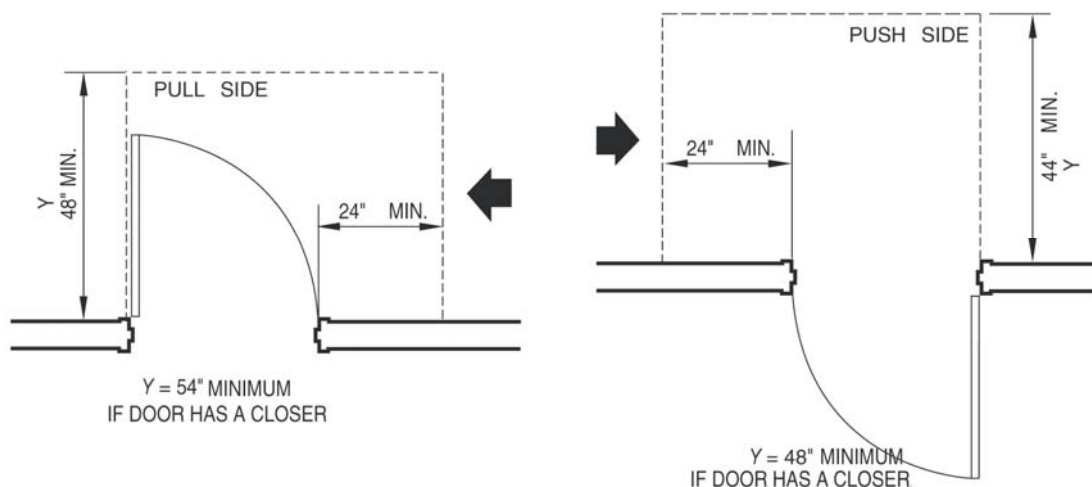


FIGURE 11A-8C - LATCH-SIDE APPROACHES - SWINGING DOORS

Maneuvering spaces at sliding and folding doors:

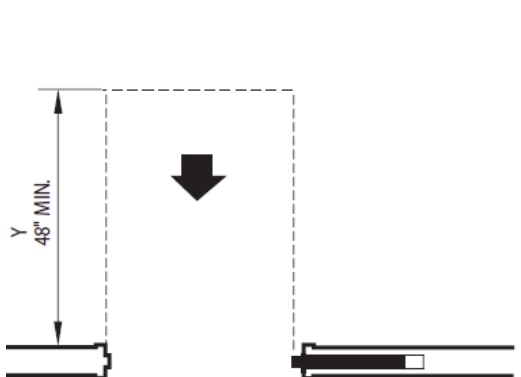


FIGURE 11A-8D – FRONT APPROACH

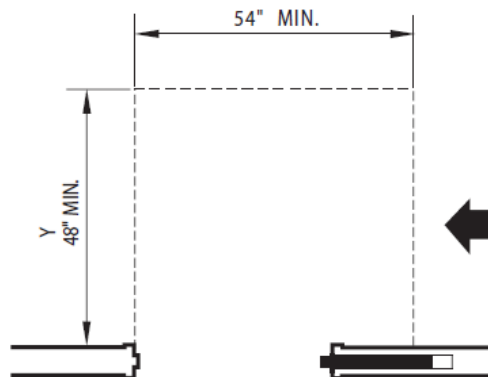
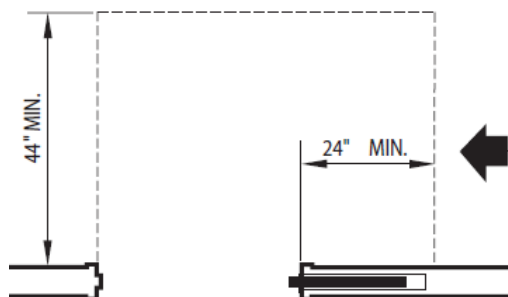


FIGURE 11A-8E – SLIDE SIDE APPROACH

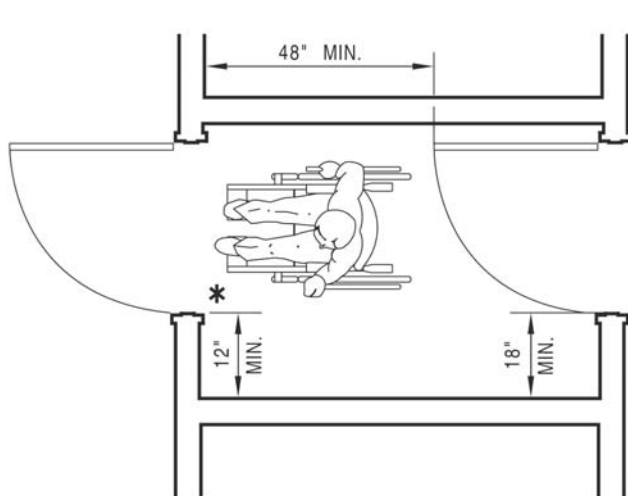


**FIGURE 11A-8F
LATCH SIDE APPROACH**

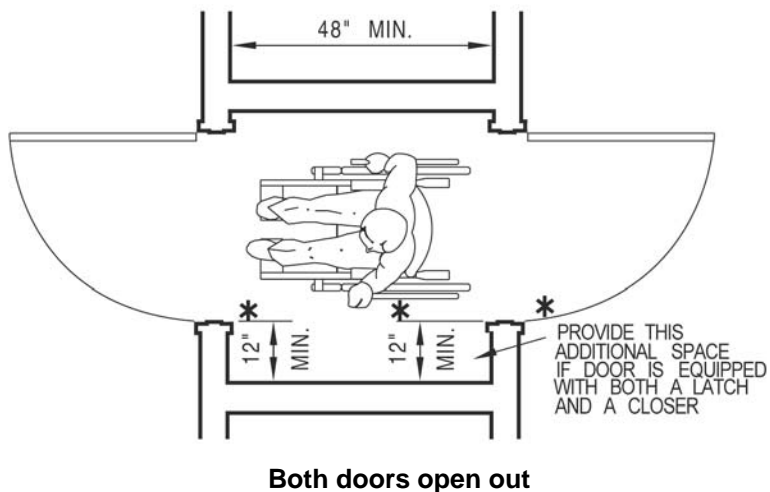
Space between consecutive doors:

(1126A.3.3) & (Figures 11A-8G and 11A-8H)

- ☐ Minimum space between two hinged or pivoted doors in series, serving other than a required exit stairway: 48" minimum plus the width of the door swinging into the space.
- ☐ Doors in series swing either in the same direction or away from the space between the doors.
- ☐ Where the door opens into a stair or smoke-proof enclosure, the landing need not have a minimum length of 60"s. (See Figure 11A-8H)



Doors in series



Both doors open out

**FIGURE 11A-8G—VESTIBULE
(Serving other than a required exit stairway)**

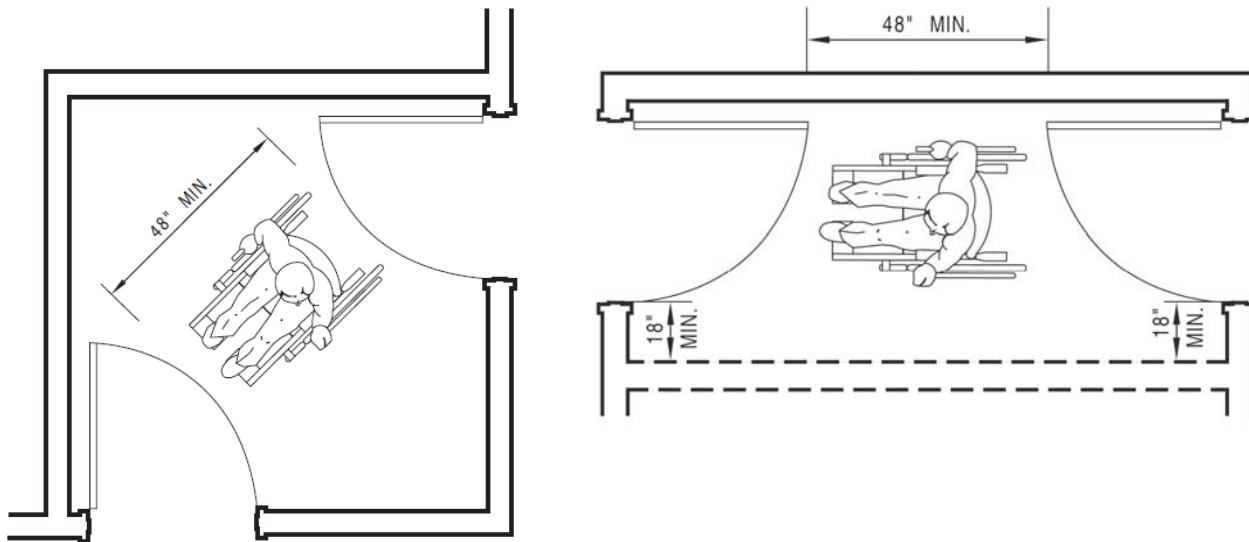


FIGURE 11A-8H—VESTIBULE
(Serving other than a required exit stairway)

Closer-effort to operate doors:

(1126A.4)

- ☐ Maximum effort not to exceed 8½ pounds for exterior and 5 pounds for interior doors.
- ☐ Pull/push effort applied at right angles to hinged doors (at center plane of sliding/folding doors).
- ☐ Compensating devices or automatic door operators may be utilized to meet standards.
- ☐ Fire doors: Maximum effort may be increased to 15 pounds; ask the enforcing agency for details.
- ☐ If the door has a closer, the sweep period shall be adjusted - from open position of 70 degrees, the door will take at least 3 seconds to move to a point 3" from the latch.

Hand-activated door hardware:

(1126A.6)

- ☐ Centered between 30 and 44 inches above the floor.
- ☐ Hand-activated latching/locking doors on an accessible route operable with a single effort by hardware providing passage without requiring ability to grasp the opening hardware.
- ☐ Locked exit doors operate consistent with Section 1126A.4, in direction of egress.
 - ☐ The lever or lever of actuated latches/locks shall be curved with a return to within ½" of the door to prevent catching on the clothing of persons during egress.

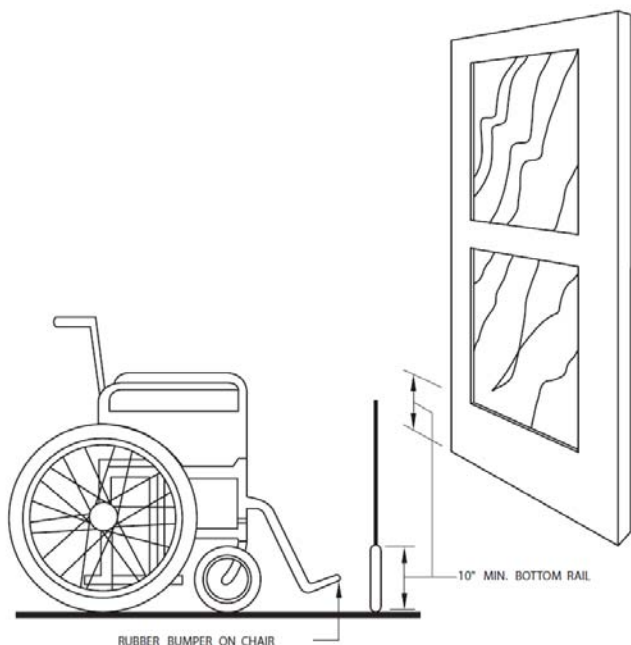
Exception: Group R and U occupancies with an occupant load of 10 or less.

Smooth surface:

(1126A.7)

- ☐ The bottom 10" of all doors and/or gates shall have a smooth, uninterrupted surface to allow the door/gate to be opened by a wheelchair footrest without creating a trap or hazardous condition.
- ☐ Where narrow frame doors are used, 10" high smooth panel shall be installed on the push side.

Exception: Automatic and sliding doors or gates.



COMMON USE FACILITIES (1127A)

General:

(1127A.1)

- ☐ When provided, common use areas and facilities shall be accessible.
- ☐ All entrances, doors, fixtures and controls shall be on an accessible route.
- ☐ Doors shall not swing into the floor space required for any fixture.
- ☐ Doors to accessible bathrooms. (See Section 1126A on p. 21)
- ☐ Clear floor spaces at fixtures and controls: accessible routes and turning spaces may overlap.
- ☐ Where controls, dispensers, receptacles or other types of equipment are provided, at least one of each shall be on an accessible route.
- ☐ Bathtubs or showers: where provided, one fixture of each type (per room) shall be accessible.
- ☐ Toilet facilities: Where provided, at least 1% of the fixtures, but not less than one of each type, shall be accessible.

Examples of Common use facilities: Lobbies; toilet and bathing facilities; laundry; community rooms; clubhouses; health and fitness facilities; game rooms; common use tenant storage.

Multiple-accommodation toilet facilities:

(1127A.2.1) & (Figures 11A-9A & 11A-9B)

Wheelchair clearance:

- ☐ A clear space measured from the floor to a height of 27", within the sanitary facility room, of sufficient size to inscribe a circle with a diameter not less than 60"; or
- ☐ A clear space 56" x 63" in size.
- ☐ A door may encroach into this space 12" maximum, except doors to accessible WC compartments.
- ☐ Clear space at fixtures: Doors shall not swing into the floor space required for any fixture.

Accessible water closet (WC) compartment:

- ☐ 28" minimum clear space from WC fixture to other fixtures or 32" minimum clear space from a wall to the side of the WC fixture.
- ☐ The other side of the WC shall provide 18" from the centerline of the WC to the wall.
- ☐ 60" minimum width stall.
- ☐ 48" minimum clear space in front of the WC if the stall has an end-opening door (facing the WC).
- ☐ 60" minimum clear space in front of the WC if the door is located at the side.
- ☐ Grab bars shall not project more than 3" into the clear spaces.

Compartment doors:

- ☐ Equipped with an automatic-closing device.
- ☐ 32" clear opening when located at the end or 34" when located at the side.
- ☐ For standard doors with 9" minimum clearance for footrests underneath and a self-closing device; clearance at the strike edge is not required.
- ☐ A loop or U-shaped handle immediately below the latch of doors (inside and outside).
- ☐ Latch shall be flip-over style, sliding or other hardware not requiring the user to grasp or twist.
- ☐ Except for door-opening widths and door swings, a clear, unobstructed access of not less than 44" shall be provided to WC compartments.
- ☐ The space immediately in front of a WC compartment not less than 48".

Large toilet rooms:

- ☐ Where 6 or more stalls are provided within a multiple-accommodation toilet room, at least one stall shall comply with the (above) requirements for clear space and accessible WC compartment.
- ☐ At least one additional stall shall be 36" wide with an outward swinging self-closing door and accessible grab bars installed on each compartment side wall.

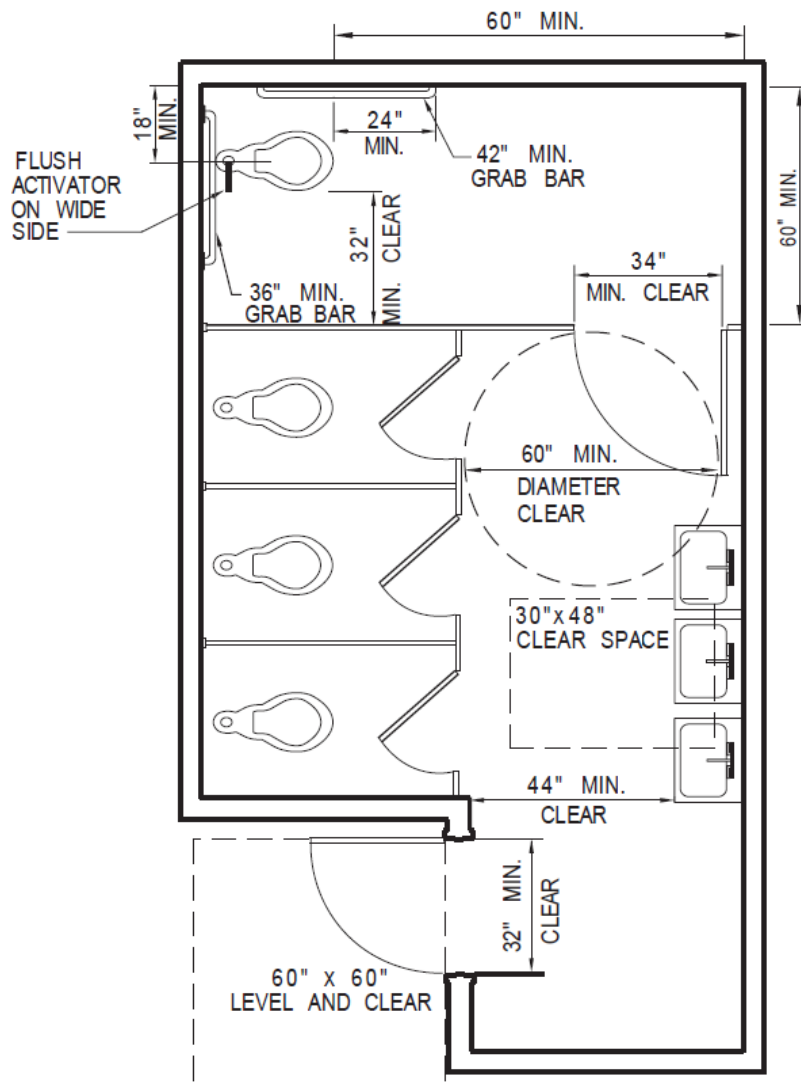


FIGURE 11A-9A
Multiple accommodation toilet facility

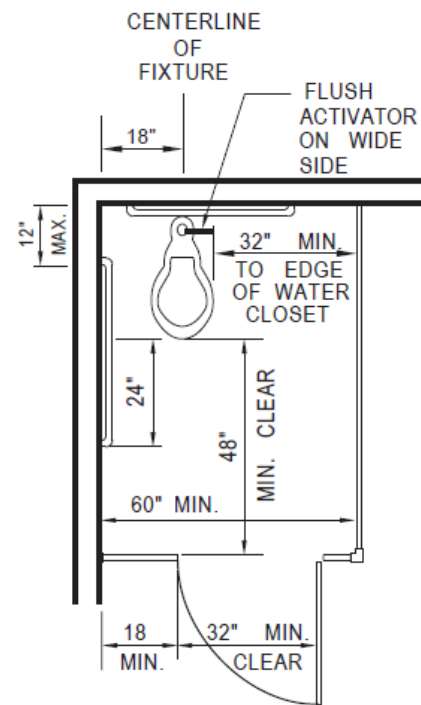
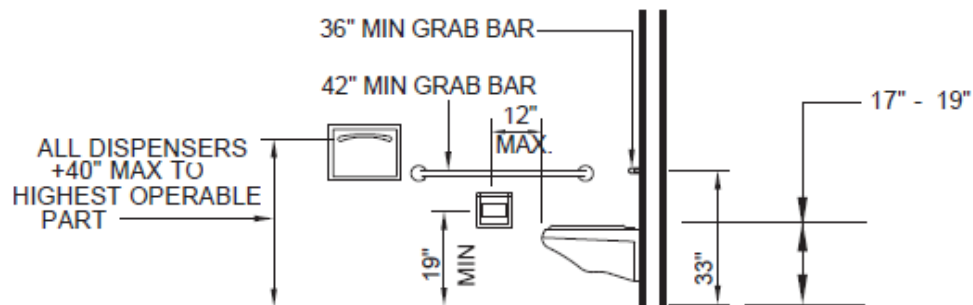


FIGURE 11A-9B
Accessible WC compartment

Water closets:

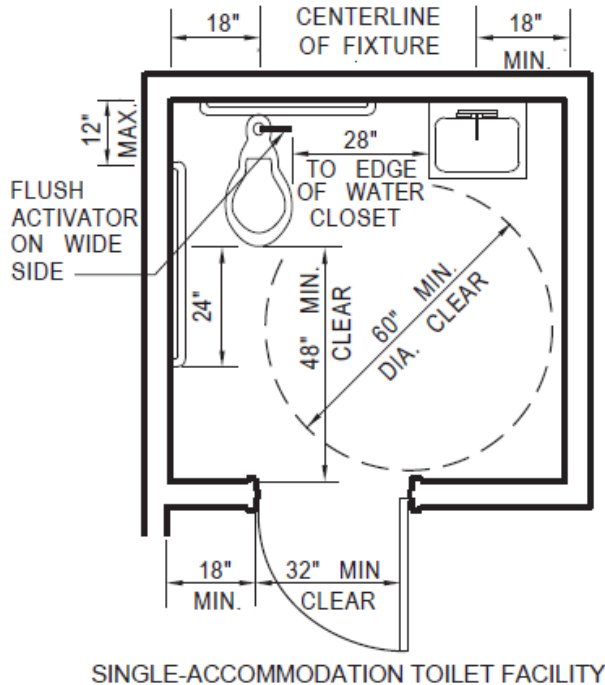
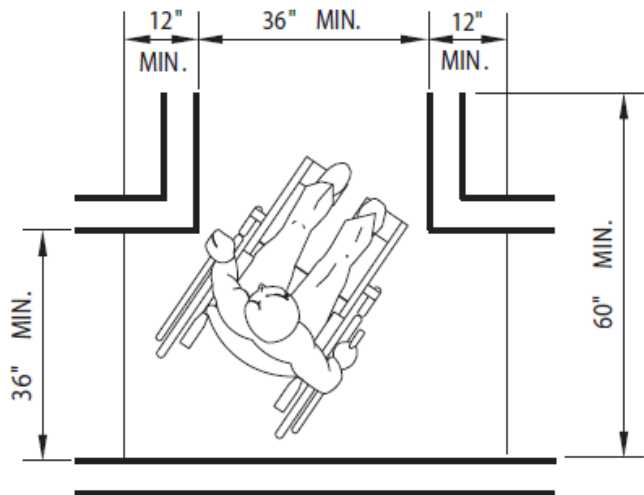
(1127A.2.3)

- ☐ 17-19 inches maximum height, measured to the top of 2" high maximum toilet seat.
- ☐ Controls shall be operable with one hand without requiring tight grasping, pinching or twisting.
- ☐ Flush valve controls are mounted on the wide side of the toilet area, 44" maximum above the floor.
- ☐ The force required to activate controls no greater than 5 pounds.
- ☐ Seats shall not be sprung to return to a lifted position.



Single-accommodation toilet facilities:**(1127A.2.2) & (Figure 11A-9B)**

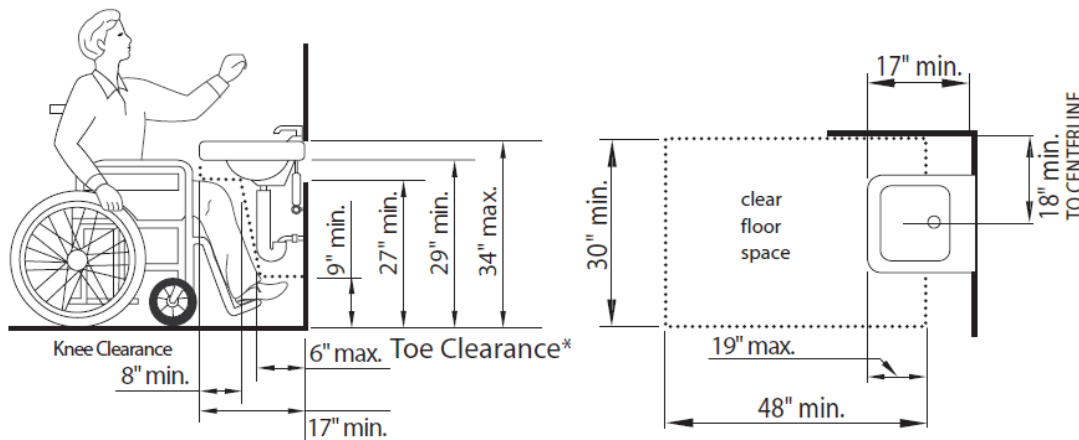
- ☐ 30" wide by 48" long space for a wheelchair to enter the room and permit the door to close.
- ☐ 60" in diameter clear floor space or a T-shaped space complying with Figure 11A-1D (b).
- ☐ 12" maximum encroachment of doors into the clear space, except panel door to WC compartment.
- ☐ Accessible water closet: Minimum 28" wide clear space from the fixture or a minimum 32" wide clear space from a wall at one side.
- ☐ The other side of the WC shall provide 18" from the centerline of the WC to the wall.
- ☐ 48" minimum clear space in front of the WC.
- ☐ For grab bars installation, see Section 1127A.4.
- ☐ Accessible route: All doors, fixtures and controls shall be on an accessible route.
- ☐ 36" minimum clear width of an accessible route, except at doors.
- ☐ Details for clear width of turn around and obstructions on Figure 11A-1C (p. 18).

**SINGLE-ACCOMMODATION TOILET FACILITY****FIGURE 11A-9B****(b) T-SHAPED SPACE FOR 180° TURNS****FIGURE 11A-1D (b)****Accessible urinals:****(1127A.2.4)**

- ☐ Where provided, at least one shall have a clear floor space 30" x 48" in front.
- ☐ Clear space shall comply with Section 1127A.9.4.
- ☐ Accessible urinal shall be floor mounted or wall hung.
- ☐ Where wall-hung urinals are provided, at least one shall be with rim projecting 14"-17" from the wall and 17" maximum above the floor.
- ☐ Flush controls shall be operable with one hand without requiring tight grasping, pinching or twisting.
- ☐ Mounted 44" maximum above the floor.
- ☐ The force required to activate controls no greater than 5 pound.
- ☐ Electronic automatic flushing controls are acceptable and preferable.

Accessible lavatories:**(1127A.3)**

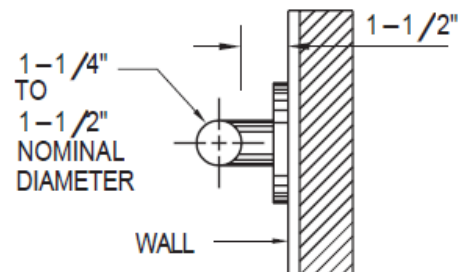
- ☐ When provided, at least one, and not less than 1% of all lavatories, shall be accessible.
- ☐ Installed with the centerline of fixture 18" minimum horizontally from an adjoining wall or fixture.
- ☐ The top of the fixture rim 34" maximum above the finished floor.
- ☐ 30" x 48" minimum clear maneuvering space provided in front of accessible lavatories.
- ☐ Such space shall adjoin or overlap an accessible route and shall not extend into the knee and toe space underneath the lavatory more than 19"
- ☐ See Section 1127A.9.5 for allowable reach ranges.
- ☐ Knee space: Clear and unobstructed, at least 30" wide and 8" deep.
- ☐ Knee space: 29" minimum high at the front face, reducing to not less than 27" at a point 8" back from the front edge.
- ☐ Toe space: At least 30" wide centered on the lavatory.
- ☐ At least 17" deep measured from the front edge; and at least 9" high from the floor.
- ☐ The finished floor beneath the lavatory extended to the wall.
- ☐ Insulated or otherwise covered hot water and drain pipes, accessible under lavatories.
- ☐ No sharp or abrasive surfaces under lavatories.
- ☐ Faucet controls operable with one hand, not requiring tight grasping, pinching or twisting.
- ☐ The required force not greater than 5 pound.
- ☐ Examples: lever operated, push type and electronically controlled mechanisms.
- ☐ Self-closing valves are allowed if the faucet remains open for at least 10 seconds.



***Note:** If a minimum of 9 inches height of toe clearance is provided, a maximum of 6 inches of the 48 inches of clear floor space required at the fixture may extend into the toe space.

FIGURE 11A-9D—KNEE CLEARANCE**Grab bars, tub and shower seats, fasteners and mounting devices:****(1127A.4)**

- ☐ Grab bars located on each side or one side and the back of the accessible toilet stall/ compartment, securely attached and centered 33" above and parallel to the floor.
- ☐ 36" are permitted where a tank-type toilet obstructs the placement at 33".
- ☐ Space between grab bars and objects below 1 1/2" minimum.
- ☐ Grab bars 42" minimum in length with the front end positioned 24" in front of WC stool.
- ☐ Grab bars at the back minimum 36" long. (See Figures 11A-9A & 11A-9B)
- ☐ Grab bars and any wall or other surface adjacent to it free of sharp/abrasive elements.
- ☐ Edges shall have a minimum radius of 1/8".
- ☐ The diameter or width of the gripping surfaces: 1 1/4" - 1 1/2" or of a shape providing an equivalent gripping surface.
- ☐ 1 1/2" space between walls and grab bars (if mounted adjacent to a wall).



NOTE: For structural strength of grab bars, see CBC, Section 1127A.4.4.

Bathing facilities:

(1127A.5)

If provided, one of each type of fixture in each facility, and not less than 1% of all fixtures, shall be accessible.

Bathtubs:

- ☐ **Clear floor space:** (See Figure 11A-9E)
- ☐ **Seat:** In-tub seats or seats at the head of tubs shall be provided. (See Figures 11A-9E & 11A-F)
- ☐ Seats mounted securely and not to slip during use.
- ☐ **Grab bars:** (See Figures 11A-9F & 11A-9G; Section 1127A.4)
- ☐ **Controls:** (See Figure 11A-9F)
- ☐ **Shower spray unit** with 60" minimum long hose shall be provided.
- ☐ **Enclosures** (If provided) not to obstruct controls or transfer from wheelchairs onto seats or into tubs; Enclosures shall not have tracks mounted on their rims.

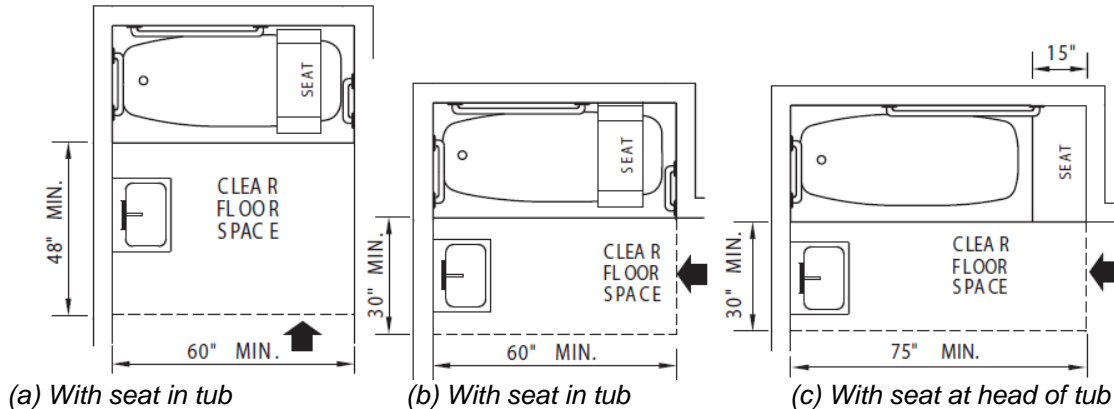


FIGURE 11A-9E - CLEAR FLOOR SPACE AT BATHTUBS

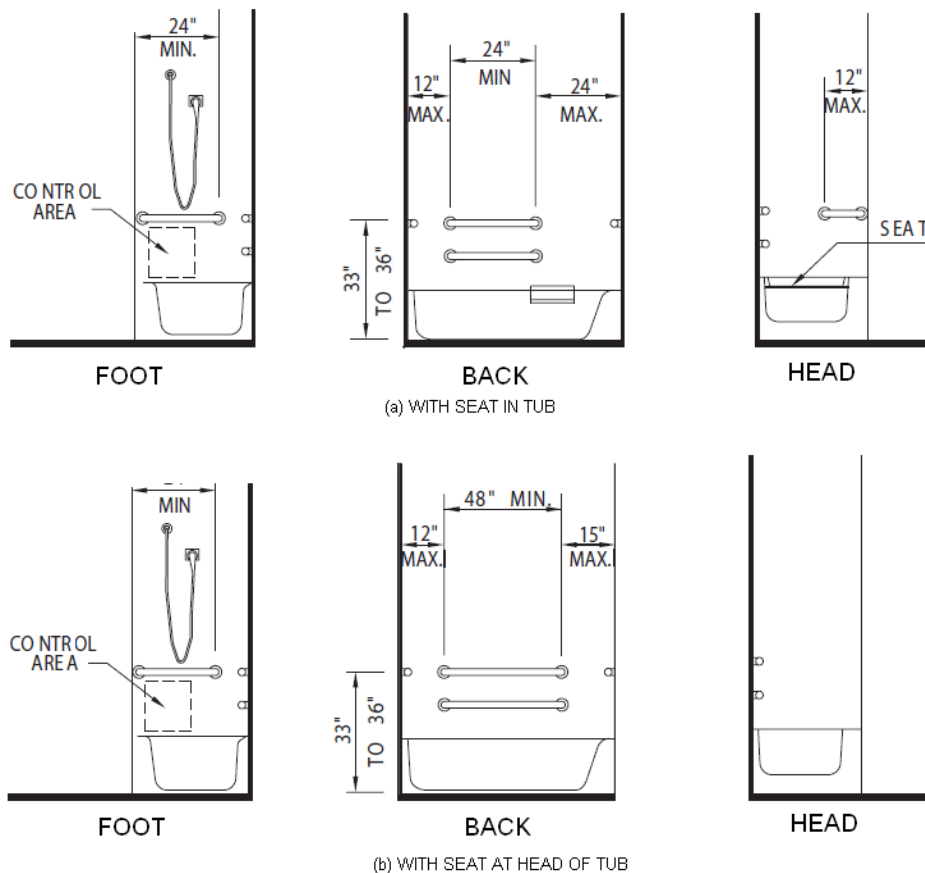
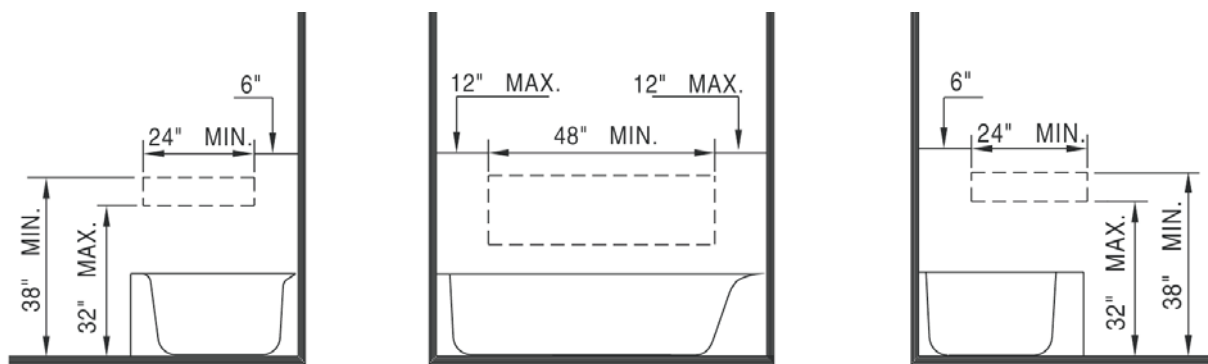


FIGURE 11A-9F—GRAB BARS AT BATHTUBS

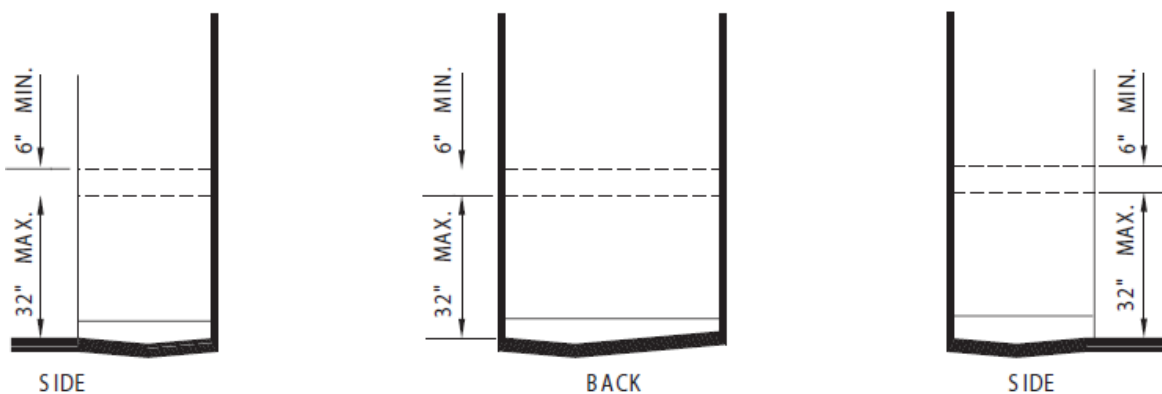


Water closet in adaptable bathrooms



NOTE: THE AREA OUTLINED IN DASHED LINES REPRESENT LOCATIONS FOR FUTURE INSTALLATION OF GRAB BARS FOR TYP. FIXTURE CONFIGURATIONS

Location of grab bar reinforcement for adaptable bathtubs



NOTE: THE AREA OUTLINED IN DASHED LINES REPRESENT LOCATION FOR FUTURE INSTALLATION OF GRAB BARS

Location of grab bar reinforcement for adaptable showers

FIGURE 11A-9G

Showers:**(1127A.5.3)**

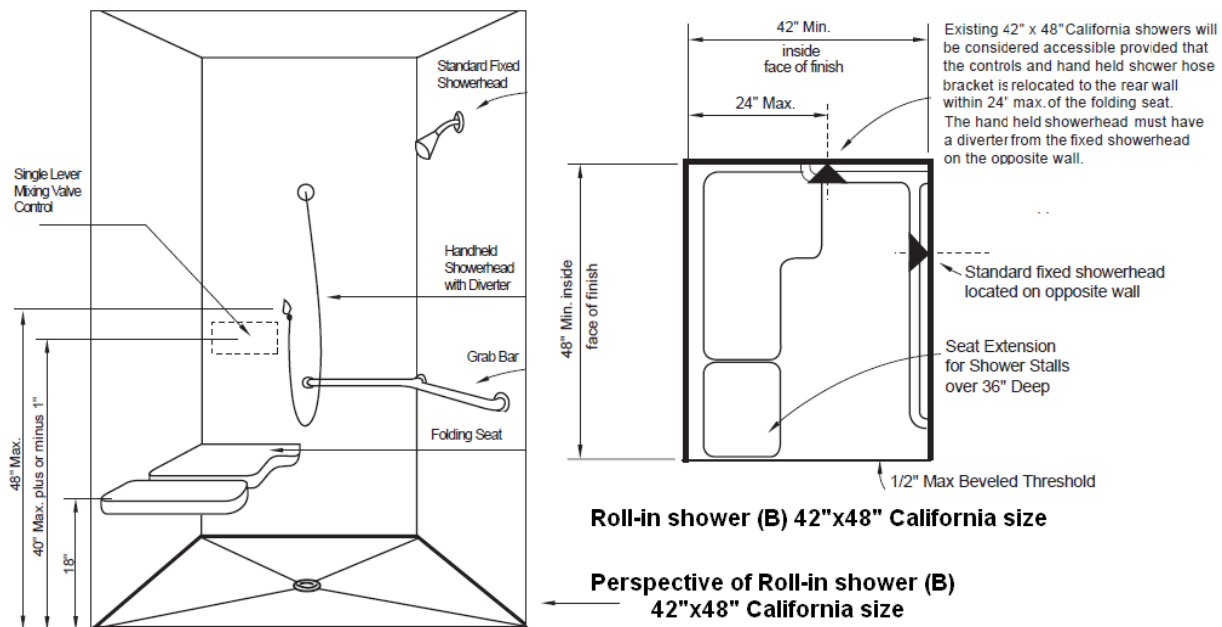
- ☐ 60" minimum between wall surfaces; 30" minimum in depth with a full opening width on the long side; or
- ☐ 42" between wall surfaces; 48" minimum in depth with an entrance opening of 42"; or
- ☐ Showers 60" minimum in width may be 36" minimum in depth if the entrance opening width is 36" minimum.
- ☐ Threshold or recessed drop (when permitted) ½" maximum high, beveled or sloped at an angle not exceeding 45 degrees from horizontal.
- ☐ Where two or more accessible showers are provided, at least one shall be constructed opposite hand from the other(s). (i.e., one left-hand control versus right-hand controls).

Shower accessories:

- ☐ Water controls of a single-lever design located on the side wall of compartment adjacent to the seat; operable with 5 pounds maximum force; mounted at 40" [+/- 1"] above the shower floor.
- ☐ The centerline of controls - within a reach range of 18"-24" from the rear edge of the seat.
- ☐ Flexible hand-held sprayer unit with minimum 60" long hose within reach range of the seat at a distance 27" maximum, measured from the rear seat edge to the centerline of the mounting bracket.
- ☐ This unit mounted at 48" maximum height [+/- 1" tolerance] above the shower floor.
- ☐ In areas subject to excessive vandalism, in lieu of the fixed flexible hose, two wall-mounted shower heads shall be installed, if shower is provided.
- ☐ Each shower head shall be operated independently of the other, and have swivel angle adjustments, both vertically and horizontally.
- ☐ One shower head shall be located at 48" height [+/- 1" tolerance] above floor.
- ☐ Maximum slope of the shower floor - 2% in any direction.
- ☐ Where drains are provided, grate openings shall be ¼" maximum, located flush with floor surface.

Shower fixtures:

- ☐ Folding seat located within 27" of the controls, mounted 18" above the floor and with 1"-1 ½" space between the edge of the seat and any wall.
- ☐ When folded, seats shall not extend more than 6" from the mounting wall.
- ☐ Grab bars located on walls adjacent to and opposite the seat.
- ☐ Mounted 33"-36" above the floor with L-shaped grab bar mounted on walls opposite and adjacent to the front edge of seat, but not extended to include that portion of wall over seat.
- ☐ Soap dish (if provided) located on the control wall at 40" maximum above the shower floor, within reach limits from the seat.
- ☐ Enclosures (when provided) shall not obstruct transfer from wheelchairs onto shower seats.

**FIGURE 11A-9I—ROLL-IN SHOWER**

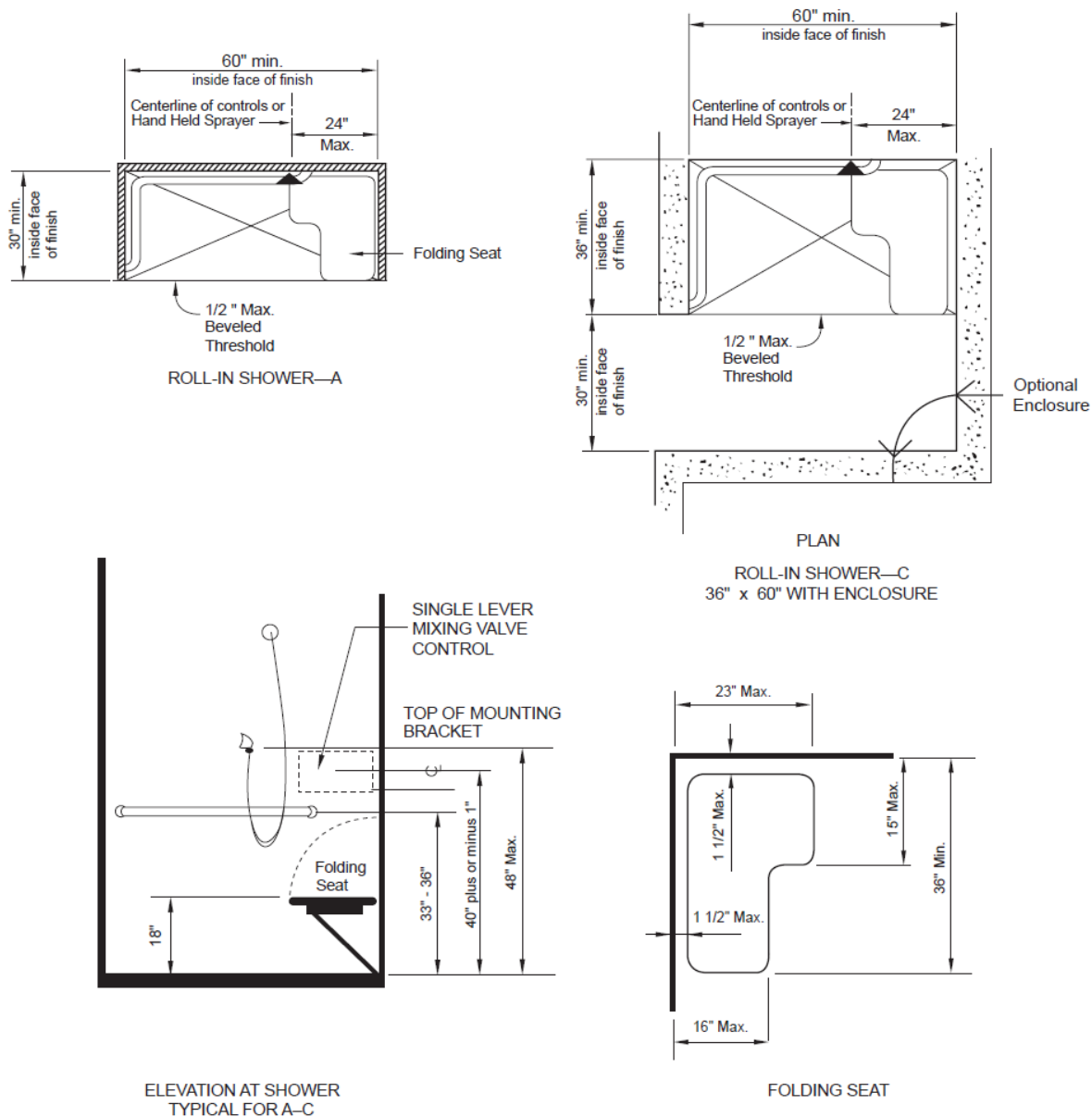
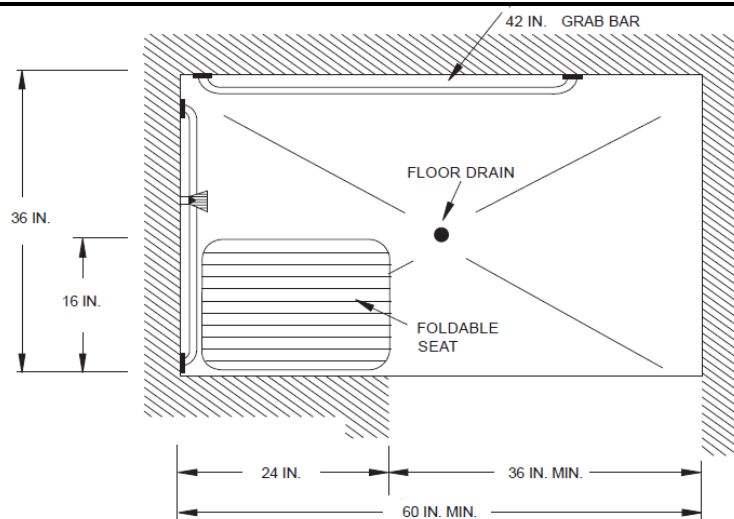


FIGURE 11A-9H—ROLL-IN SHOWER



Open showers: If no separate compartment is provided, showers shall be located in a corner with L-shaped grab bars extending along two adjacent walls with a folding seat adjacent to the controls.

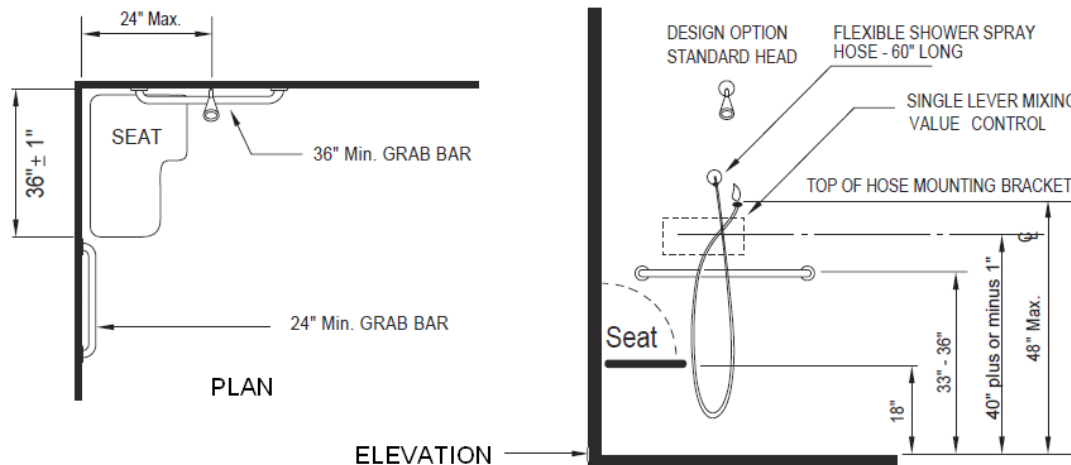


FIGURE 11A-9J – OPEN SHOWER

Lockers:

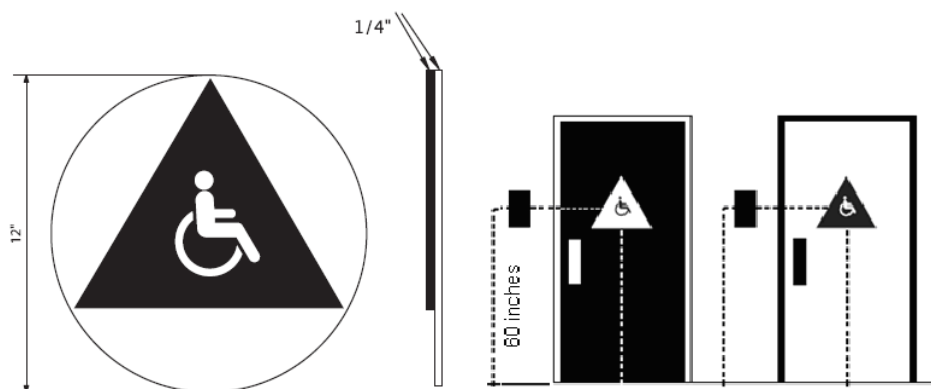
(1127A.6)

- ☐ Where provided, at least one and not less than 1% of all shall be accessible.
- ☐ A path of travel minimum 36" in clear width shall be provided to these lockers.

Signs:

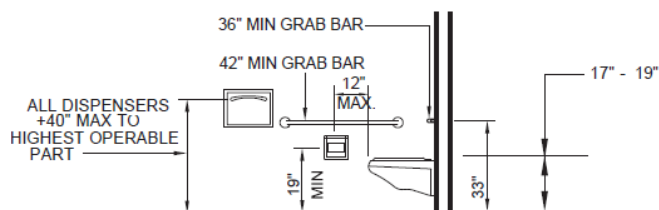
(1127A.7)

- ☐ Accessible toilet/bathing facilities identified by "International Symbol of Accessibility".
- ☐ Signs not needed for facilities within dwelling units.
- ☐ Doorways leading to men's sanitary facilities: identified by ¼" thick equilateral triangle with edges 12" long and a vertex pointing upward.
- ☐ Women's facilities: circle, ¼" thick and 12" diameter.
- ☐ Unisex: ¼" thick circle 12" diameter; ¼" thick triangle superimposed on the circle, within the 12".
- ☐ Symbols centered on the door 60" high; color and contrast distinctly different from the door.
- ☐ Additional signage requirements for sanitary facilities in Section 1143A.10.



Toilet room fixtures and accessories:

(1127A.8)



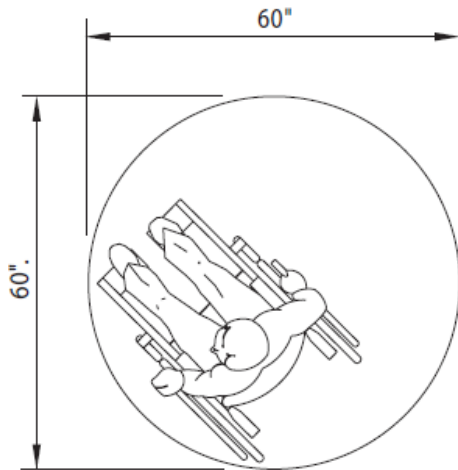
- ☐ Where towel, sanitary napkins, waste receptacles and other similar fixtures are provided, at least one of each type shall be located within 40" from finished floor.
- ☐ If mirrors are provided, at least one shall be accessible; the bottom edge 40" maximum from floor.
- ☐ Toilet tissue dispensers located on the wall within 12" of the front edge of the toilet seat.
- ☐ Dispensers controlling delivery or not permitting

continuous paper flow shall not be used.

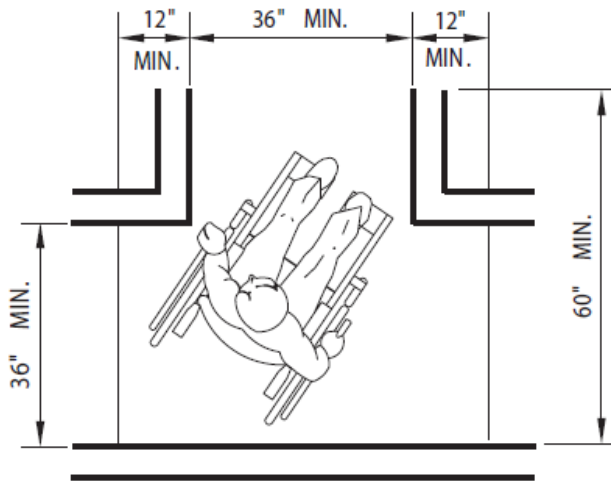
Space allowances and reach ranges in common use areas:

(1127A.9)

- 36" (continuously) minimum clear width for single wheelchair passage. (See Figure 11A-1E)
- **Exception:** 32" in width is acceptable at a point not to exceed 24" in length.
- 60" minimum width for two wheelchairs to pass. (See Figure 11A-1F)
- 60" diameter clear space or T-shaped space required for 180-degree turn. (See Figure 11A-1D)
- Surfaces of wheelchair spaces. (See Sections 1119A.2, 1120A.3 and 1121A on pp. 17 & 18)
- Gratings located in ground and floor surfaces along accessible routes shall be limited to spaces no greater than ½" wide in one direction.

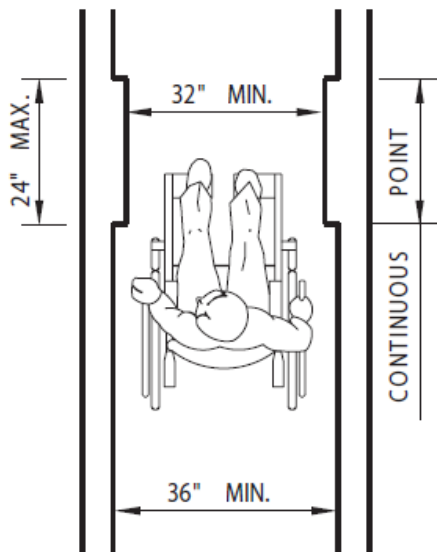


(a) 60 INCHES DIAMETER SPACE

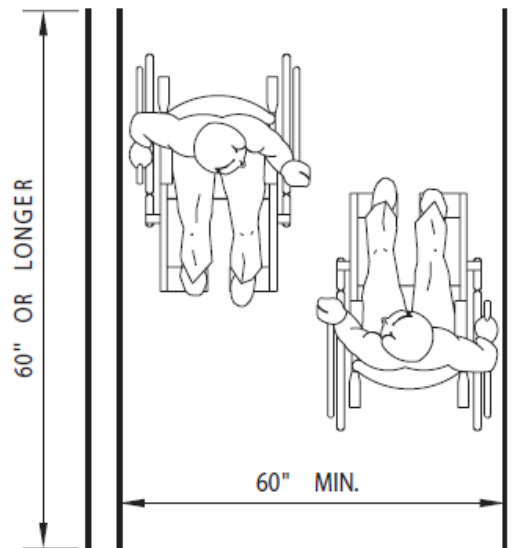


(b) T-SHAPED SPACE FOR 180° TURNS

FIGURE 11A-1D—WHEELCHAIR TURNING SPACE



**FIGURE 11A-1E
MINIMUM CLEAR WIDTH
FOR SINGLE WHEELCHAIR**



**FIGURE 11A-1F
MINIMUM CLEAR WIDTH
FOR TWO WHEELCHAIRS**

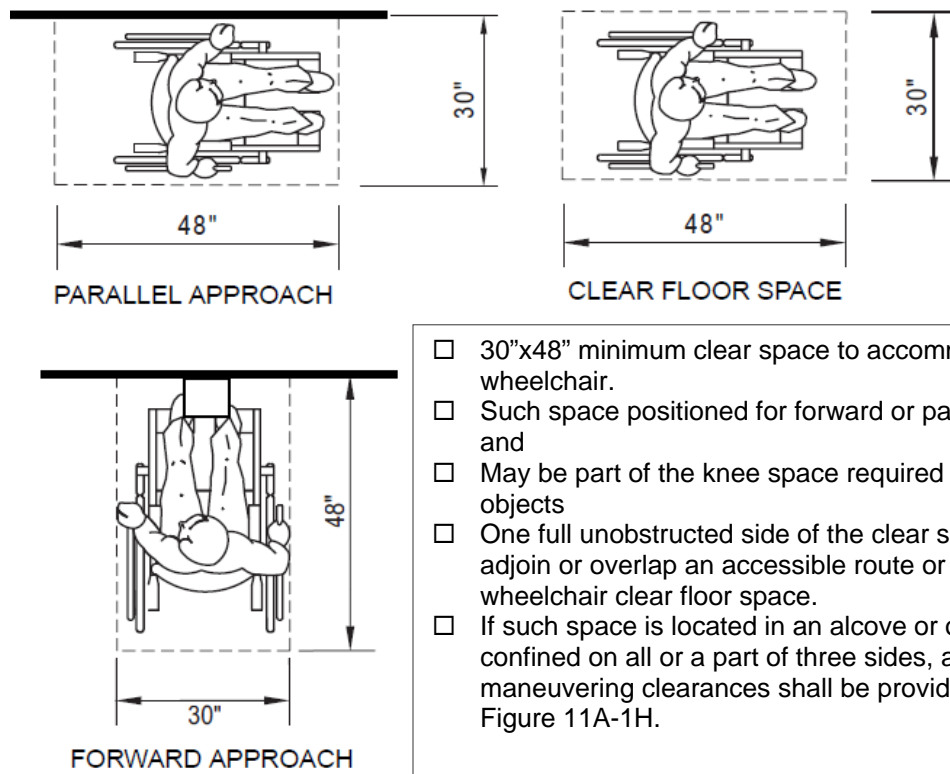


FIGURE 11A-1G - MINIMUM CLEAR FLOOR SPACE FOR WHEELCHAIRS

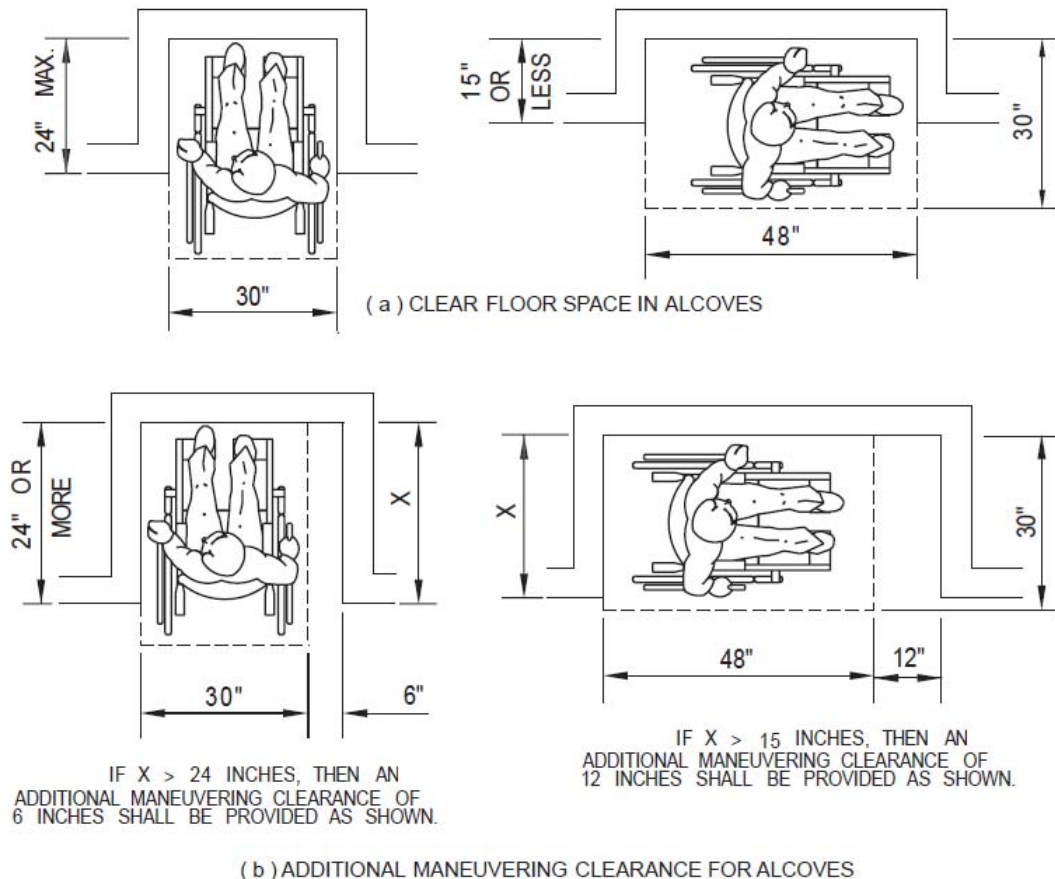
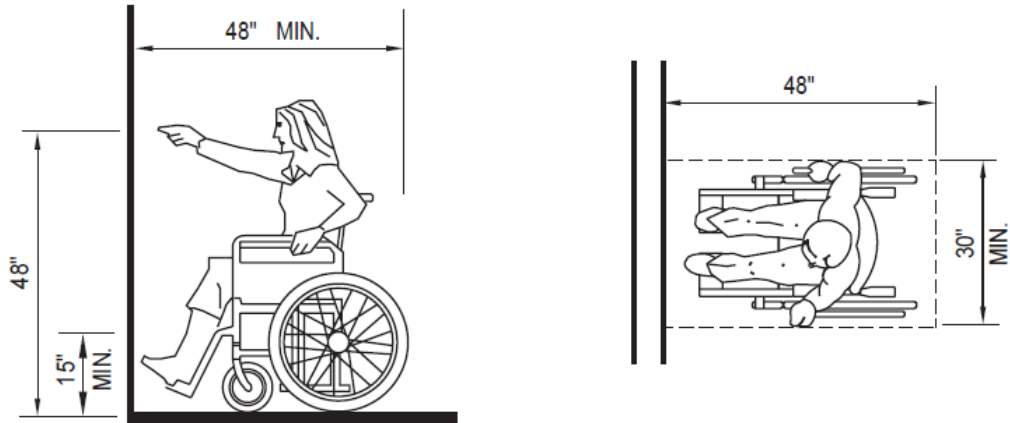


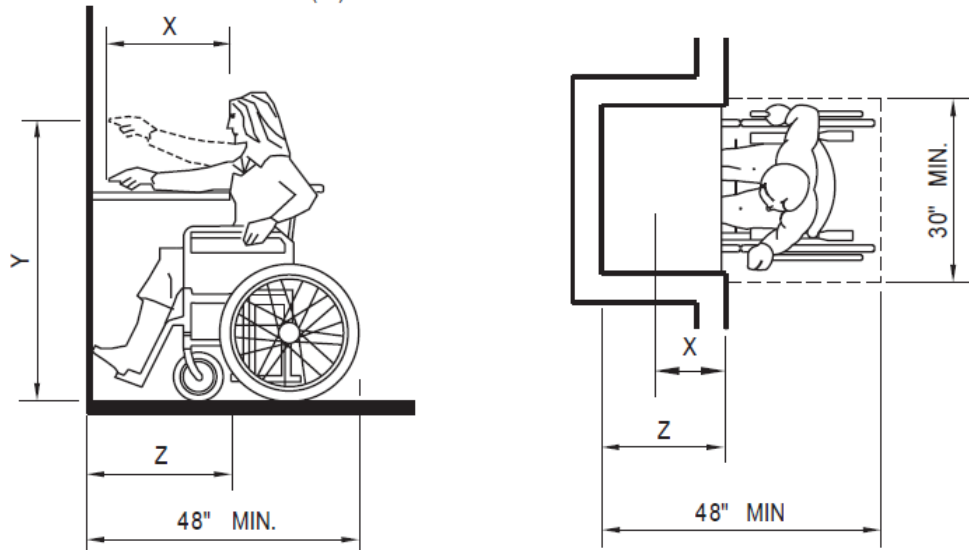
FIGURE 11A-1H - MINIMUM CLEAR FLOOR SPACE FOR WHEELCHAIRS

Forward reach:

- ☐ If the clear floor space allows only forward approach, the maximum high forward reach allowed shall be 48", and the minimum low reach shall be unobstructed and no less than 15" above the floor.
- ☐ Forward reach over an obstruction: details on Figure 11A-1I(b) below.



(a) HIGH FORWARD REACH LIMIT



NOTE: X shall be less than or equal to 25"; Z shall be greater than or equal to X. When X is less than 20", Y shall be 48" max. When X is 20 to 25", Y shall be 44" max.

(b) MAXIMUM FORWARD REACH OVER AN OBSTRUCTION

FIGURE 11A-1I—FORWARD REACH

Controls and operating mechanisms:

- ☐ Operable with one hand, not requiring tight grasping, pinching or twisting of the wrist; and
- ☐ The force required to activate controls no greater than 5 pounds.
- ☐ Clear floor space is required. (See Figures 11A-1G & 11A-1H)
- ☐ Located no higher than 48" and no lower than 15" above the finished floor.
- ☐ If the reach is over an obstruction, the maximum height shall be reduced:
- ☐ Forward approach: obstruction between 20"-25", height reduced to 44" maximum. (See Figure 11A-1I)
- ☐ Side approach: obstruction 24" maximum, height reduced to 46" maximum. (See Figure 11A-1J)
- ☐ Electrical installations. (See Section 1142A)
- ☐ Controls not satisfying these specifications are acceptable, if comparable controls or outlets, that perform the same functions, are provided within the same area.

Side reach:

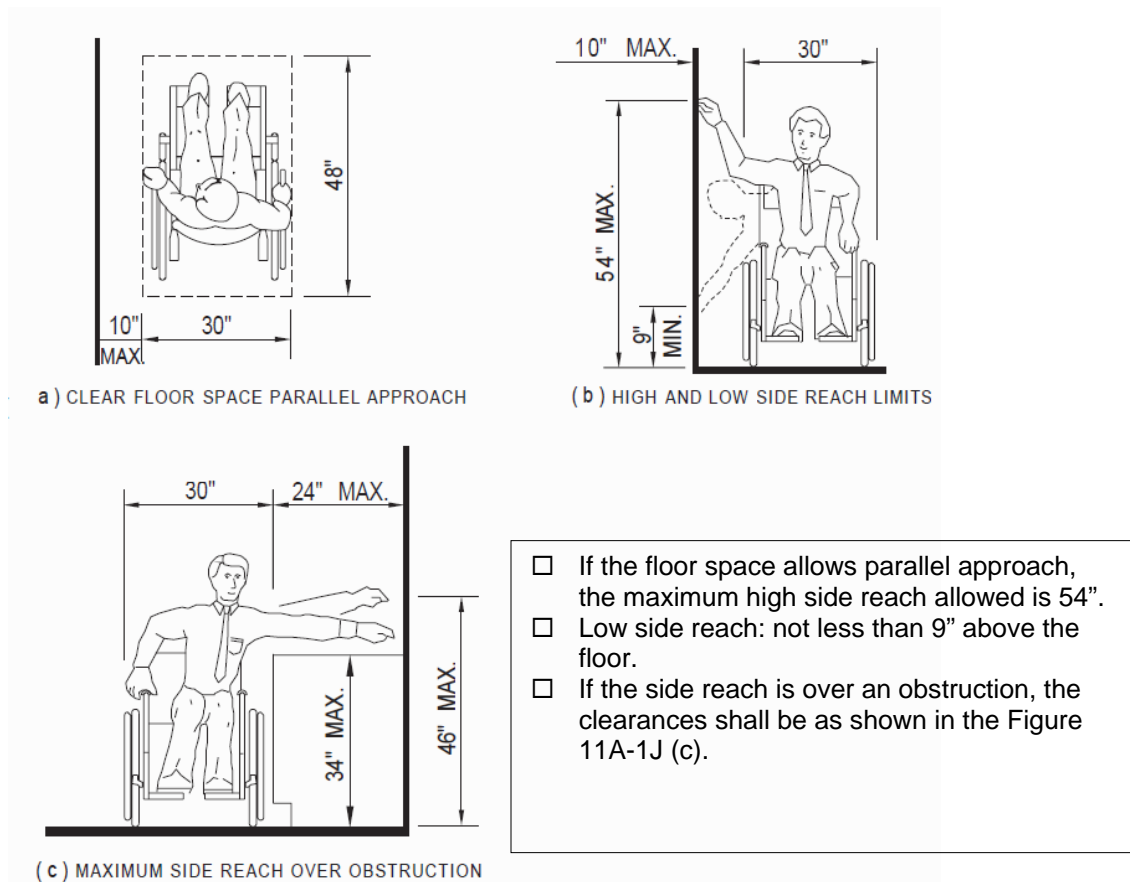


FIGURE 11A-1J – SIDE REACH

Storage:

(1127A.11)

- ☐ If fixed storage facilities (cabinets, shelves, closets, etc.) are provided where access is required, at least one of each type shall be accessible.
- ☐ 30"x48" clear floor space for forward or parallel approach shall be provided.
- ☐ Storage spaces shall be within at least one of the reach ranges specified above.
- ☐ Clothes rods maximum 54" from the floor for a side approach. (See Figure 11A-1J)
- ☐ Where the distance from the wheelchair to the clothes rod or shelf exceeds 10", the height and depth to the rod or shelf shall comply with Figure 11A-1J.

Common accessible laundry rooms:

(1127A.10)

- ☐ Where provided, at least one of each type of appliance in each laundry shall be accessible.
- ☐ Such appliances include washing machines, dryers, soap dispensers and any related features such as wash sinks and tables.
- ☐ Where laundry rooms are provided on floors of an elevator building, each room shall be accessible.
- ☐ Where there is one laundry on a ground floor in each building, each laundry shall be accessible.
- ☐ Minimum clear space 30" perpendicular by 48" parallel in front of washers/dryers is required; and
- ☐ 30"x48" minimum clear space provided for at least one of each type of fixture or appliance provided in the laundry room.
- ☐ Accessible washers and dryers shall have controls within the reach range of a seated user.
- ☐ Controls no higher than 48" and no lower than 15" above finished floor. (More details on p. 52)
- ☐ Washing machines/dryers in accessible laundry rooms shall be front loading.

Fixed or built-in seating, tables and counters:

(1127A.12)

- ☐ Where provided, 5%, but not less than one, shall be accessible.
- ☐ When accessible seating spaces are provided at fixed tables or counters, clear floor space shall be provided. (See Section 1127A.9.4 on pp. 34 & 35)
- ☐ Such space shall not overlap knee space by more than 19". (See Figure 11A-1K)
- ☐ Knee spaces at least 27" high, 30" wide and 19" deep is required.
- ☐ The tops of tables and counters shall be 28 -34 inches from the floor or ground.

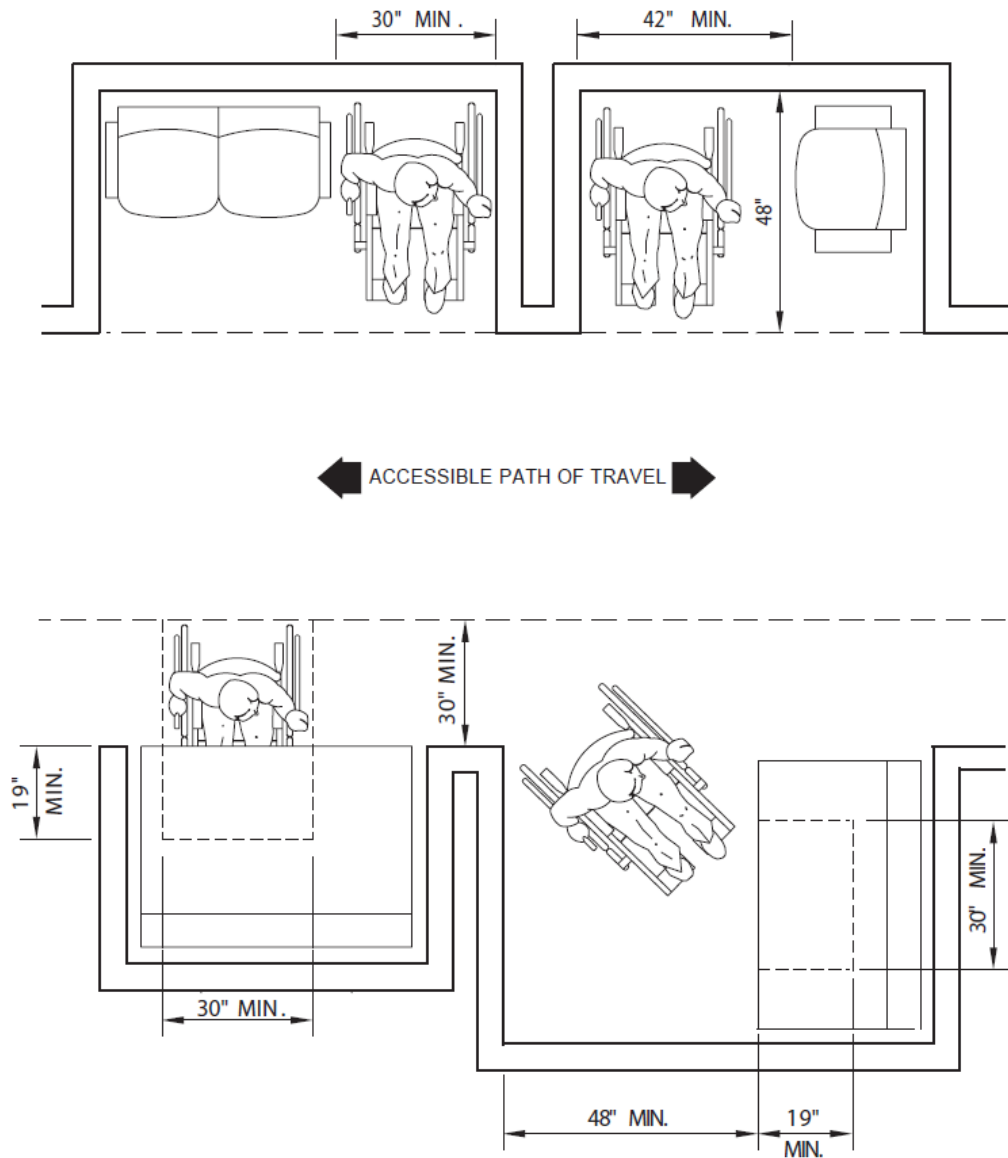


FIGURE 11A-1K—MINIMUM CLEARANCES FOR SEATING AND TABLE

DWELLING UNIT FEATURES

Covered dwelling units: (1128A.1)

- ☐ Covered multifamily dwelling units shall be adaptable and accessible into and throughout the dwelling unit.

Accessible route within covered multifamily dwelling units: (1130A.1)

- ☐ 36" minimum wide accessible route through all rooms/spaces is required.
- ☐ Accessible route shall pass through the primary entry door and connect with all additional exterior doors, required clear floor spaces at kitchen appliances and bathroom fixtures.
- ☐ **Exception:** *An accessible route is not required from the interior of the unit into a basement or garage, unless designed in accordance with Section 1109A.2.1, Exception 1.*

CHANGES IN LEVEL ON ACCESSIBLE ROUTES (1131A)

The requirements for changes in level on all accessible routes (exterior, interior and within covered multifamily dwellings) are combined for convenience; see p. 5 for details.

DOORS (1132A)

Interior doors and secondary exterior doors in the dwelling unit comply with this section.

(Including to the dwelling unit side of doors leading from the interior to an unfinished basement or a garage attached to a single-story dwelling unit.)

Primary entry doors and required exit doors: *Width and height of doors comply with Section 1126A.1 (see p. 21). For maneuvering clearances at the side of doors exposed to common or public use spaces (e.g. entry or exit doors which open from the dwelling unit into a corridor, hallway or lobby or directly to the outside), see Section 1126A.3 (p. 21).*

Width and height: (1132A.3)

- ☐ Doors not less than 6 feet 8 inches in height.
- ☐ 34" wide door is acceptable for Dwelling Units.
- ☐ 32" minimum clear opening, measured with door(s) positioned at 90 degrees from closed position.
- ☐ 32" clear opening provided by a standard 6-foot sliding patio door is acceptable.
- ☐ A pair of doors must have at least one leaf with 32" minimum clear opening.
- ☐ The width of any component in egress system not less than the minimum required by Section 1005.

Maneuvering clearances at doors: (1132A.5)

- ☐ **Interior doors:** 42" minimum length on both sides.
- ☐ 39" length is acceptable when a minimum clear opening of 34" is provided.
- ☐ **Primary entry and required exit doors:** 44" minimum length on the dwelling unit side; and
- ☐ Section 1126A.3 (p. 21) for the side of the door exposed to common or public use spaces.

Strike edge maneuvering space:

- ☐ Width of the level area on the side to which the door swings: extend 18" past the strike edge.
- ☐ Section 1126A (p. 21) for the exterior side of the primary entry door and required exit doors.
- ☐ 24" is preferred for strike edge clearance.
- ☐ Section 1134A (p. 43) for accessible bathrooms.

Door signal devices: (1132A.10)

- ☐ Primary entrances to dwelling units provided with a door buzzer, bell, chime or equivalent.
- ☐ Activating mechanisms mounted 48" maximum above the floor; connected to permanent wiring.

NOTE: Details for the following sections may be found on p. 24:

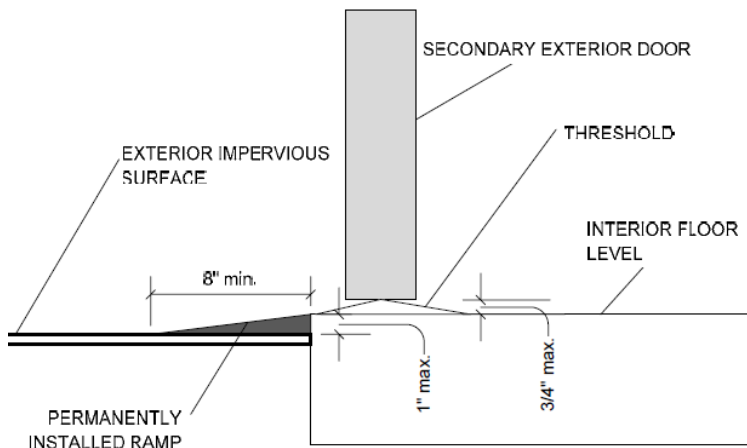
Closer-effort to operate doors (1132A.6)

Hand-activated door hardware (1132A.8)

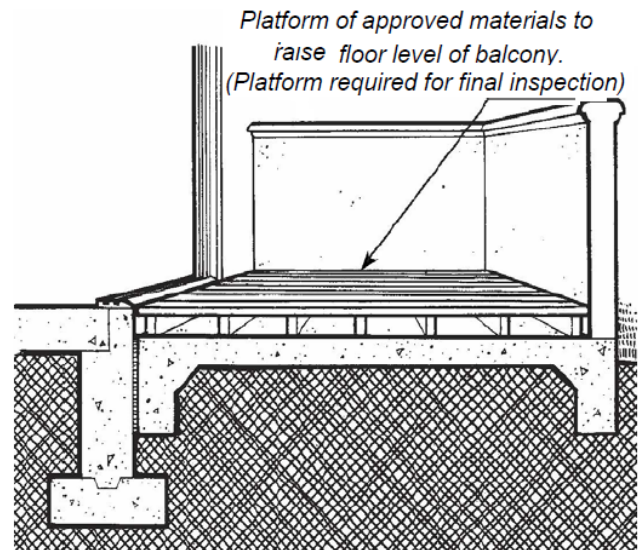
Smooth surface (1132A.9)

Level floor or landing:**(1132A.4)**

- ☐ The floor or landing on each side of a door shall be level.
- ☐ Exterior landings of impervious construction serving primary entry and required exit doors are limited to $\frac{1}{2}$ " maximum change in height between floor surfaces.
- ☐ Changes in level. (See Section 1131A on p. 5)
- ☐ Exterior and interior landings of pervious construction shall be the same level, except that secondary exterior doors may have $\frac{1}{2}$ " maximum change in height between floor surfaces.
- ☐ Secondary exterior doors onto decks, patios or balcony surfaces constructed of impervious materials may have 4" maximum change in height from interior landing; if
- ☐ Changes in height greater than $\frac{1}{2}$ " are accomplished by means of a ramp; or
- ☐ By means of platform. (See Figure 11A-8J)
- ☐ Secondary exterior doors onto decks, patios or balcony surfaces constructed of impervious materials may have 1" maximum change in height from interior; if
- ☐ A ramp with maximum slope of 1:8 is installed. (See Figure 11A-8K)
- ☐ In buildings containing multifamily dwelling units the floor/landing immediately outside the entry may be sloped up to $\frac{1}{4}$ " per foot (direction away from the primary entrance) for drainage.
- ☐ $\frac{1}{2}$ " maximum high thresholds at primary entry and required exit doors.
- ☐ $\frac{3}{4}$ " maximum for thresholds at secondary exterior doors, including sliding door tracks.
- ☐ Changes in height at interior door thresholds not to exceed $\frac{1}{2}$ ".
- ☐ Thresholds with a change in height of not more than $\frac{1}{4}$ " may be vertical.
- ☐ Thresholds with a change in height between $\frac{1}{4}$ " and $\frac{3}{4}$ " shall be beveled with a slope no greater than 1:2 (50-percent).



**FIGURE 11A-8K - RAMP
AT SECONDARY EXTERIOR DOOR**



**FIGURE 11A-8J - PLATFORM
AT SECONDARY EXTERIOR DOOR**

KITCHENS (1133A)

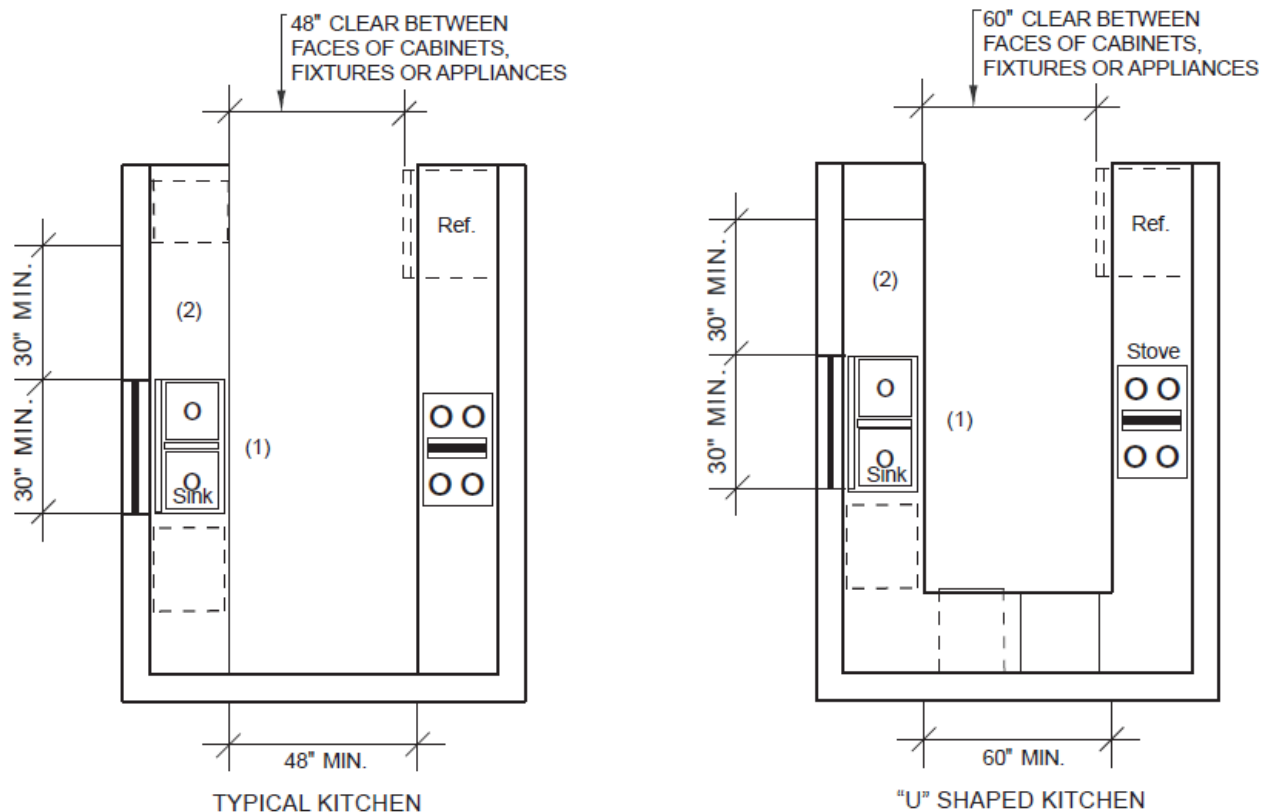
- ☐ Kitchens shall be on an accessible route.

(1133A.1)

Clear floor space:

(1133A.2)

- ☐ 30" x 48" minimum allowing parallel approach at the range or cooktop.
- ☐ 30" x 48" for parallel or forward approach at the kitchen sink and all other fixtures/ appliances.
- ☐ Centerline of 30" x 48" space aligned with the centerline of appliances/fixtures.
- ☐ Minimum clear width, measured between any cabinet, countertop or face of any appliance projecting into the kitchen and the opposing cabinet, countertop, appliance or wall, is required.
- ☐ 60" minimum clear width for U-shaped kitchens, designed with parallel approach at ranges or cook-tops located at the base of the U.
- ☐ U-shaped kitchens with cooktop or sink located at the base of U which provides 30" wide knee space to a height of 27" above the floor for forward approach, shall have 48" minimum clear width.
- ☐ 48" minimum clear width for all other kitchen designs.



- (1) 30" wide counter top space for sink installation with removable base cabinet and finish flooring beneath sink
- (2) 30" wide counter top workspace
- (3) 30"x48" clear space adjacent to range or cooktop to allow parallel approach
- (4) 30"x48" either parallel approach at oven, dishwasher, trash compactor or refrigerator

FIGURE 11A-10A

Removable base cabinets: (1133A.3)

- ☐ Directly under the kitchen sink counter area in order to provide clearance for wheelchairs.
- ☐ Use of specialized tools is not permitted.
- ☐ Finish floor beneath kitchen sink counter area extended to the wall.

Countertops: (1133A.4)

- ☐ 30" minimum linear length required for the kitchen sink.
- ☐ Additional 30" minimum for a work surface.
- ☐ Sink and work surface may be a single integral unit, 60" minimum long; or
- ☐ Separate components.
 - ☐ **Exception:** *Two 15" wide breadboards may be provided in lieu of 30" countertop work surface.*

Repositionable countertops: (1133A.4.1)

- ☐ Provided in a minimum of 5 % of the covered multifamily dwelling units.
- ☐ Kitchen sinks and work surface spaces designed to enable repositioning to 28" height.
- ☐ Base cabinets directly under kitchen sinks and work surfaces shall be removable.
- ☐ Sides of adjacent cabinets and the back wall, which may become exposed to moisture or food when a countertop is lowered, constructed of durable, nonabsorbent materials.
- ☐ Finished flooring extended to the wall beneath the sink and work surface.

Exceptions:

- ☐ *Stone, cultured stone and tiled countertops may be used without meeting the requirements.*
- ☐ *Two 15" wide breadboards may be provided in lieu of 30" work surface.*

Lower shelving: (1133A.5)

- ☐ Lower shelving and/or drawer space shall be provided at a height 48" maximum above the floor.

Kitchen sink faucet controls: (1133A.6)

- ☐ Operable with one hand, with no tight grasping, pinching or twisting of the wrist.
- ☐ Controls activated with force not greater than 5 pounds.
- ☐ Acceptable designs: lever-operated, push-type and electronically controlled mechanisms.
- ☐ Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

BATHING & TOILET FACILITIES

Bathrooms shall be designed to comply with one of the following options:

(1134A.2)

☐ **Option 1: All bathrooms in the dwelling unit comply with the following:**

1. Toilet, bathing and shower facilities comply with Section 1134A.4.
2. Bathtubs shall comply with Section 1134A.5.
3. Showers shall comply with Section 1134A.6.
4. Water closets shall comply with Section 1134A.7.
5. Lavatories, vanities, mirrors and towel fixtures shall comply with Section 1134A.8.
6. Bathrooms shall be provided with an accessible route into and through the bathroom.
7. If a door is provided, it shall comply with the requirements of Section 1132A.5.
8. 18" minimum clear maneuvering space shall be provided on the swing side of the door at the strike edge of the door.
9. Switches, outlets and controls shall comply with Section 1142A.
10. Reinforced walls to allow for the future installation of grab bars around the toilet, tub and shower shall comply with Sections 1134A.5 for bathtubs, 1134A.6 for showers and 1134A.7 for water closets. Grab bars shall comply with Section 1127A.4.

☐ **Option 2: Only one bathroom within the dwelling unit shall be designed to comply with:**

1. Toilet, bathing and shower facilities shall comply with Section 1134A.4.
2. Bathtubs shall comply with Section 1134A.5.
3. Showers shall comply with Section 1134A.6.
4. Water closets shall comply with Section 1134A.7.
5. Lavatories, vanities, mirrors and towel fixtures shall comply with Section 1134A.8.
6. Where both a tub and shower are provided in the bathroom, at least one shall be made accessible. See Section 1134A.5 for bathtubs or Section 1134A.6 for showers.
7. When two or more lavatories are provided, at least one shall be made accessible and comply with Section 1134A.8.
8. Bathrooms shall be provided with an accessible route into and through the bathroom.
9. If a door is provided, it shall comply with the requirements of Section 1132A.5.
10. A minimum 18-inch clear maneuvering space shall be provided on the swing side of the door at the strike edge of the door.
11. Switches, outlets and controls shall comply with Section 1142A.
12. Reinforced walls to allow for the future installation of grab bars around the toilet, tub and shower shall comply with Sections 1134A.5 for bathtubs, 1134A.6 for showers and 1134A.7 for water closets. Grab bars shall comply with Section 1127A.4.

When Option 2 is used, all additional bathrooms must comply with Items 8 through 12 above.

Powder rooms:

(1134A.3)

- ☐ All powder rooms shall comply with Option 2, items 8 through 12.
- ☐ In addition, when the powder room is the only toilet facility on an accessible level, it shall comply Sections 1134A.4, 1134A.7, and 1134A.8

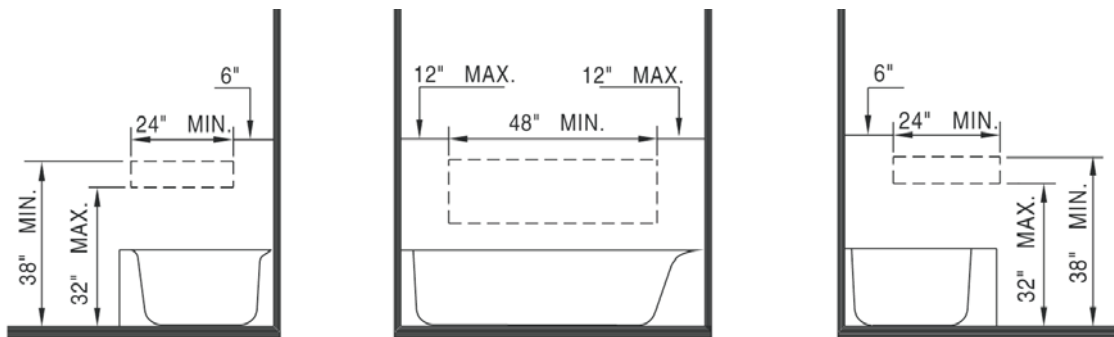
Sufficient maneuvering space:

(1134A.4)

- ☐ Adaptable bathing & toilet facilities shall provide sufficient maneuvering space.
- ☐ Where the door swings into the bathroom or powder room, there shall be a clear maneuvering space outside the swing of at least 30"x48" within the room.
- ☐ The clear maneuvering space shall allow the user to position a wheelchair or other mobility aid clear of the path of the door as it is closed and to permit use of fixtures.
- ☐ Doors may swing into the required clear space at any fixture when a clear maneuvering space is provided outside the swing arc of the door so it can be closed.
- ☐ Maneuvering spaces may include any knee or toe space available below fixtures.

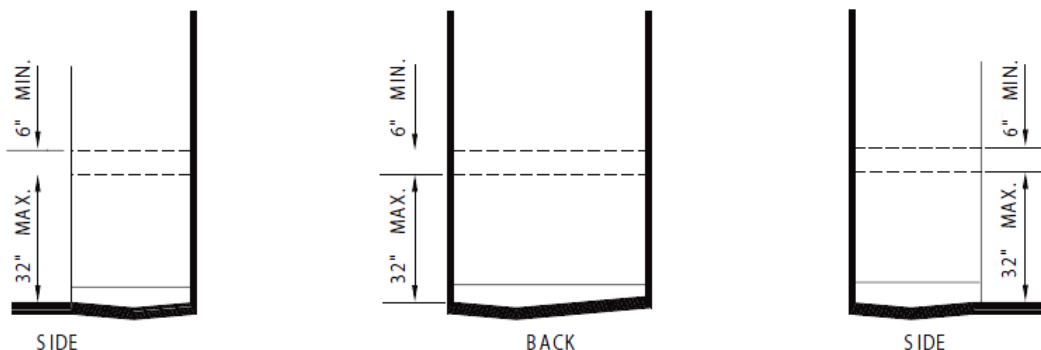
Bathtubs (1134A.5)

- ☐ Minimum clear floor space: 48" parallel by 30" perpendicular to the side of a bathtub or bathtub-shower combination, measured from the foot or drain end of the bathtub.
- ☐ The area under a lavatory may be included in the clear floor space (check for knee/toe space).
- ☐ Cabinets under lavatories and toilets shall not encroach into the clear floor space.
- ☐ Reinforced walls for grab bars: Reinforcement located on each end of the bathtub.
- ☐ 6" minimum nominal in height; installed 32"- 38" above the floor.
- ☐ Extending 24" minimum from the front edge toward the back wall of the bathtub.
- ☐ Reinforced areas for installation of floor-mounted bars for bathtubs without surrounding walls.
- ☐ Grab bar reinforcement installed on the back wall of the bathtub: 6" maximum above the bathtub rim; extending upward to at least 38" above the floor.
- ☐ Grab bar backing installed horizontally to permit the installation of 48" grab bar with each end 6" maximum from the end walls of the bathtub.
- ☐ Faucet controls operable with one hand with no tight grasping, pinching or twisting of the wrist.
- ☐ Acceptable designs: Lever operated, push type and electronically controlled mechanisms.
- ☐ A shower spray unit is not required in bathtubs.
- ☐ Doors and panels of enclosures: constructed from approved, shatter-resistant materials.
- ☐ Hinged doors shall open outward.
- ☐ Glazing used in doors and panels of enclosures: fully tempered, laminated safety glass or approved plastic.
- ☐ When glass is used: 1/8" minimum thickness when fully tempered or 1/4" when laminated.
- ☐ Plastics used in doors and panels of bathtub enclosures shall be of a shatter-resistant type.



NOTE: THE AREA OUTLINED IN DASHED LINES REPRESENT LOCATIONS FOR FUTURE INSTALLATION OF GRAB BARS FOR TYP. FIXTURE CONFIGURATIONS

FIGURE 11A-9G (b) – GRAB BAR REINFORCEMENT FOR ADAPTABLE BATHTUBS



NOTE: THE AREA OUTLINED IN DASHED LINES REPRESENT LOCATION FOR FUTURE INSTALLATION OF GRAB BARS

FIGURE 11A-9G (c) – GRAB BAR REINFORCEMENT FOR ADAPTABLE SHOWERS

Showers (1134A.6)

- ☐ If one or more shower stalls are provided, at least one shall be accessible/ adaptable.
- ☐ Shower stall at least 42" wide by 48" deep with an entrance opening of at least 36"; or
- ☐ At least 36" deep by 60" wide with 36" minimum entrance when a wall is installed on the opening side; or
- ☐ At least 30" deep by 60" wide with an entrance opening of at least 60".
- ☐ WC may project 12" maximum into the opening if 36" clear space is maintained between WC and the shower wall.
- ☐ Maximum slope of shower floor: 1/2" per foot in any direction to a drain.
- ☐ Floor surface: Carborundum or grit-faced tile, or material providing equivalent slip resistance.
- ☐ 30" minimum in width by 48" minimum in length clear maneuvering space located outside the shower, flush and parallel to the control wall.
- ☐ Grab bar reinforcement installed continuous in the walls 32" to 38" above the floor; and
- ☐ 6" minimum nominal in height.
- ☐ Glass-walled shower stalls shall provide reinforcement for installation of floor-mounted or ceiling-mounted grab bars.
- ☐ Thresholds (when used): 2" maximum in height with beveled or sloped angle not exceeding 1 unit vertical in 2 units horizontal (26.6 degrees from the horizontal).
- ☐ Thresholds less than 1/2" in height may have a beveled or sloped angle not exceeding 1:1 (45 degrees from the horizontal).
- ☐ Operation mechanisms operable with one hand with no tight grasping, pinching or twisting.
- ☐ The force required to activate controls no greater than 5 pound-force.
- ☐ Doors and panels of enclosures constructed from approved, shatter-resistant materials.
- ☐ Hinged shower doors shall open outward.
- ☐ Glazing used in enclosures: tempered, laminated safety glass or approved plastic.
- ☐ When glass is used: 1/8" minimum thickness when fully tempered or 1/4" when laminated.

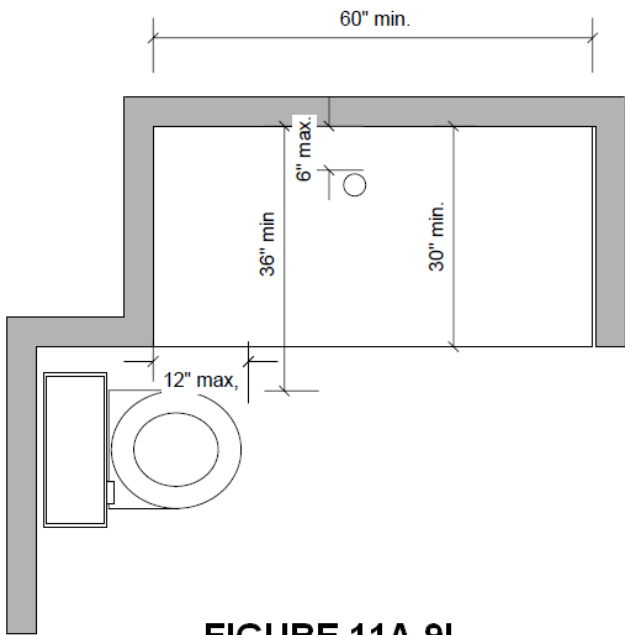


FIGURE 11A-9L
SHOWER WITH WATER CLOSET

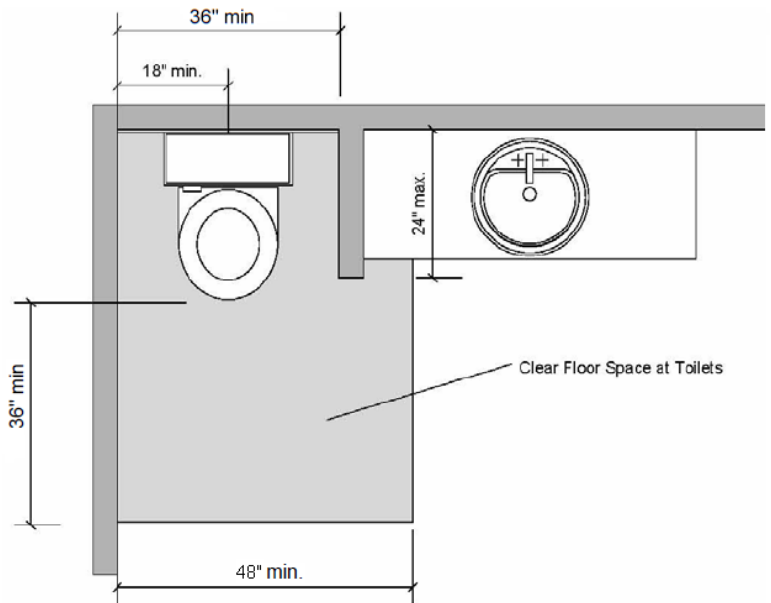


FIGURE 11-9M
WING WALL OR CABINET AT WATER CLOSET

Water closets (1134A.7)

- ☐ 48" minimum in clear width floor space, extending the front edge of the WC at least 36".
- ☐ The 48" clear width may be reduced to 36" for lavatories, cabinets, wing walls or privacy walls located immediately adjacent to a WC which extend no more than 24" in depth. (See Figure 11A-9M)
- ☐ Location of WC shall permit installation of a grab bar on one side of fixture.
- ☐ WC adjacent to walls, lavatories, vanities or bathtubs: the centerline of WC shall be 18" minimum from the obstacle.
- ☐ WC not placed adjacent to a side wall: the bathroom shall have provisions for installation of floor-mounted, foldaway or similar alternative grab bars.
- ☐ WC placed adjacent to a side wall: reinforcement on both sides or one side and the back.
- ☐ If reinforcement is installed at the back, it shall be between 32" and 38" above the floor; and
- ☐ The grab bar reinforcement minimum 6" nominal in height.
- ☐ The backing shall be 40" minimum in length.
- ☐ Reinforcement installed at the side of the WC shall be 32" to 38" above the floor.
- ☐ 12" maximum from the rear wall, extending 26" minimum in front of the WC.
- ☐ 6" minimum nominal in height.
- ☐ Minimum height: 15" above the floor.
- ☐ WC controls mounted no more than 44" above the floor.
- ☐ The force required to activate controls no greater than 5 pound.



FIGURE 11A-9G (a)
WATER CLOSET IN ADAPTABLE BATHROOMS

Laundry rooms:

(1135A)

- ☐ If washing machines and clothes dryers are provided, one of each type appliance is required
- ☐ Where front-loading washers are not provided, management shall provide assistive devices on request of the occupant, to permit the use of top-loading clothes washers.

Electrical Receptacle, Switch and control heights:

(1136A)

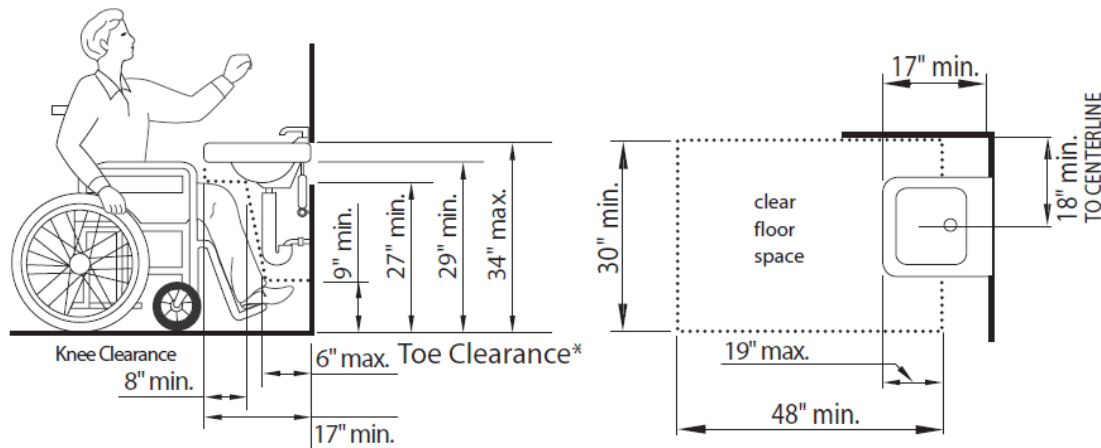
NOTE: The requirements for Electrical Receptacle, Switch and control heights are combined for convenience. (See p. 52)

Lavatories, vanities, mirrors and towel fixtures (1134A.8)

- ☐ Accessible bathrooms or powder rooms shall have at least one accessible lavatory.
- ☐ Where mirrors or towel fixtures are provided, the bottom edge shall be no higher than 40" from the floor.
- ☐ Vanities and lavatories installed with the centerline 18" minimum from an adjoining wall or fixture to allow forward approach.
- ☐ When parallel approach is provided, the centerline 24" minimum from an adjoining wall or fixture.
- ☐ The top of the fixture rim 34" maximum above the finished floor.
- ☐ A clear maneuvering space 30"x 48" provided at lavatories (centered on the lavatory).
- ☐ Cabinets under lavatories are acceptable-provided the bathroom has space to allow a parallel approach and the lavatory cabinets are designed with adaptable knee and toe space.
- ☐ The knee space shall be at least 30" wide and 8" deep.
- ☐ The knee space shall be 29" minimum high at the front face, reducing to not less than 27" at a point 8" back from front edge.
- ☐ The space beneath lavatories shall be left clear and unobstructed.
- ☐ Any cabinet beneath shall be removable without use of specialized knowledge or tools;
- ☐ Doors to the cabinet beneath lavatories shall be removable or openable to provide the required unobstructed knee and toe space.

Required toe space:

- ☐ 30" minimum wide and centered on the lavatory.
- ☐ 17" minimum deep measured from the front edge.
- ☐ 9" minimum high from the floor
- ☐ The finished floor beneath the lavatory extended to the wall.
- ☐ Hot water and drain pipes exposed under lavatories shall be insulated or otherwise covered.
- ☐ No sharp or abrasive surfaces under lavatories.
- ☐ Faucet controls and operation mechanisms shall be operable with one hand without tight grasping, pinching or twisting.
- ☐ The force required to activate controls no greater than 5 pound-force.
- ☐ Acceptable designs: Lever operated, push-type and electronically controlled mechanisms.
- ☐ Self-closing valves are allowed if the faucet remains open for at least 10 seconds.



****Note: If a minimum of 9" height of toe clearance is provided, a maximum of 6" of the 48" of clear floor space required at the fixture may extend into the toe space.***

FIGURE 11A-9D—KNEE CLEARANCE

FEATURES COMMON TO EXTERIOR AND INTERIOR OF BUILDINGS

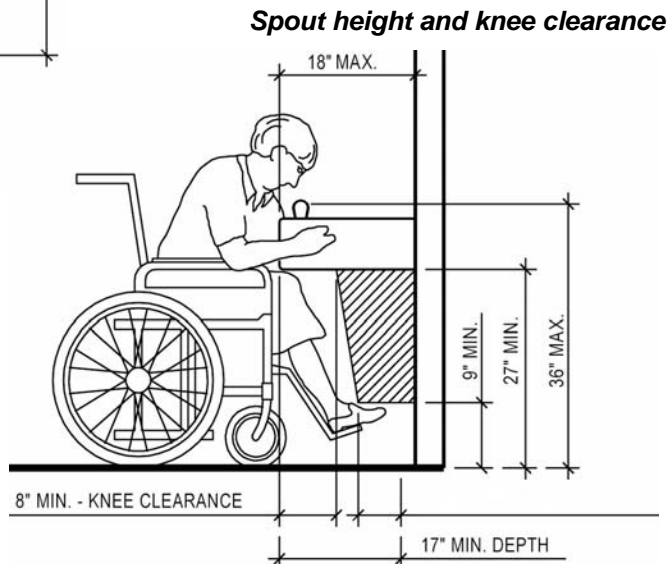
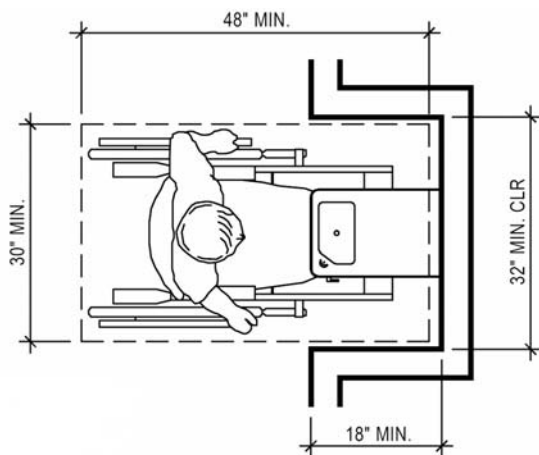
ACCESSIBLE DRINKING FOUNTAINS (1139A)

- ☐ Side approach drinking fountains not acceptable.
- ☐ Fountains/water coolers shall be on an accessible route.
- ☐ Located within alcove or otherwise positioned not to encroach into pedestrian ways.
- ☐ Alcoves minimum 32" in width and 18" in depth.
- ☐ Protruding objects project maximum 4" into walks, halls, corridors, passageways, aisles.

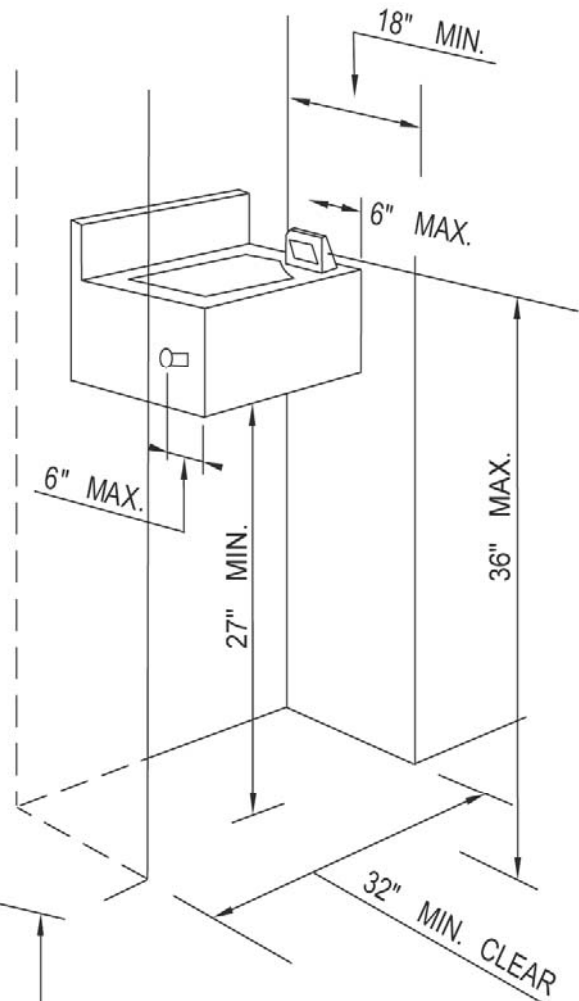
Exception: If it would create an unreasonable hardship to locate a fountain in an alcove, the fountain may project into the path of travel, identifiable as follows:

- ☐ The surface of path of travel at the fountain shall be textured so that it is clearly identifiable by a blind person using a cane.
- ☐ The minimum textured area shall extend from the wall supporting the fountain to 1 foot beyond the front edge of the fountain and shall extend 1 foot beyond each side of the water fountain; or
- ☐ Wing walls provided on each side of the water fountain.
- ☐ The wing walls project out from the supporting wall at least as far as the fountain to within 6" of the surface of the path of travel.
- ☐ 32" minimum clearance between the wing walls is required.

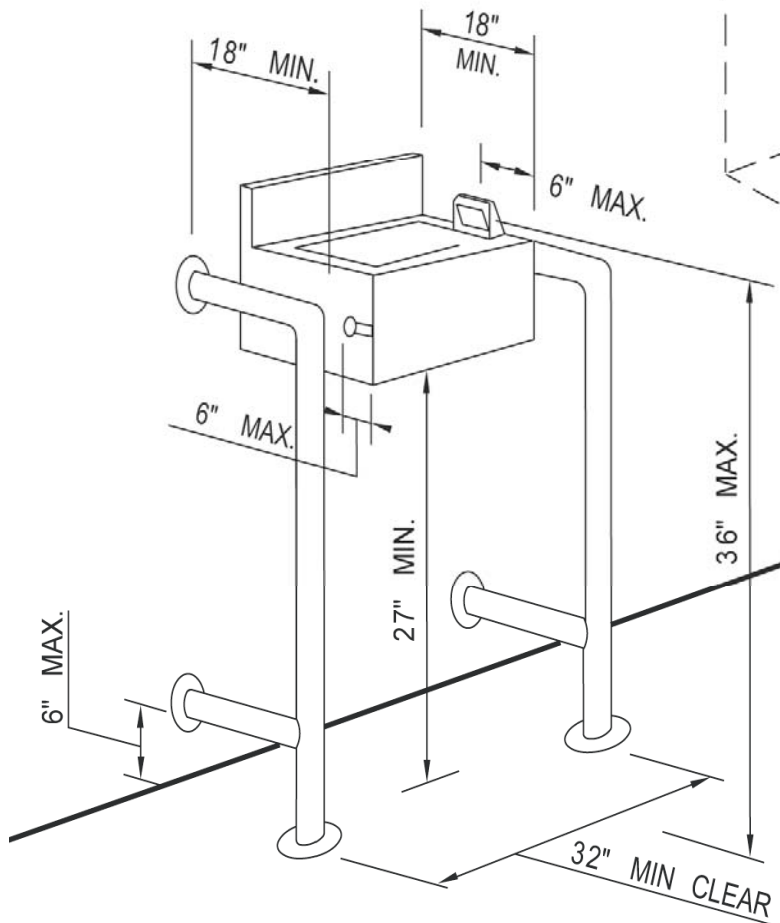
Clear floor space at drinking fountains alcoves



- ☐ 30"x48" minimum clear floor space for forward approach.
- ☐ Clear knee space 30" minimum in width and 18" minimum in depth.
- ☐ Clear and unobstructed knee space under the fountain minimum 27" in height and 8" in depth (taken from the front edge of the fountain).
- ☐ Toe clearance 9" high (above the floor) and 17" deep (from the front edge of the fountain).
- ☐ Spout located within 6" of the front edge of the fountain and 36" of the floor.
- ☐ 4" high water flow available to allow insertion of cup or glass.
- ☐ Water stream from the bubbler: substantially parallel to the front edge of the fountain.
- ☐ Force required for activating controls: 5 pounds maximum.
- ☐ Manually operated or electronically operated controls located within 6" of the front edge of the fountain.



ALCOVE INSTALLATION



NONALCOVE WING WALL INSTALLATION

ACCESSIBLE TELEPHONES (1140A)

On floors with public telephones, at least one shall be accessible. On any floor with two or more banks of multiple phones, at least one telephone in each bank shall be accessible.

Clear floor or ground space:

(1140A.2)

- ☐ 30"x48" allowing forward OR parallel approach.
- ☐ Bases, enclosures and fixed seats shall not impede approaches to telephones.
- ☐ Clear floor/ground space may be part of the knee space required under some objects.

Relationship of maneuvering clearances to wheelchair spaces:

(1140A.3)

- ☐ One full unobstructed side of the clear floor/ground space shall adjoin another wheelchair clear floor space.
- ☐ If a clear floor space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances shall be provided.

Mounting height:

(1140A.4)

- ☐ Highest operable part of telephones: within the reach ranges specified in Fig.11A-11B (p. 51).
- ☐ Telephones mounted diagonally in a corner that require wheelchair users to reach diagonally shall have the highest operable part no higher than 54" above the floor.

Enclosures (if provided) may overhang a clear floor space with limits:

(1140A.5)

- ☐ **Side Reach Possible.** Overhang no greater than 19".
- ☐ Height of the lowest overhanging part equal to or greater than 27" above floor.
- ☐ **Full-height Enclosures.** Entrances to full-height enclosures minimum 30" in width.
- ☐ **Forward Reach Required.** For overhangs greater than 12", 30" minimum clear width of enclosure.
- ☐ If clear width is less than 30", height of the lowest overhanging part equal to or greater than 27".

Equipment for hearing impaired people:

(1140A.6)

- ☐ Telephones shall be equipped with receivers generating magnetic fields in the area of the receiver cap.
 - ☐ At least one public telephone on each floor or in each bank, whichever is more, shall be equipped with a volume control.
 - ☐ Such phones shall be capable of 12 dbA – 18 dbA above normal.
 - ☐ If an automatic reset is provided, 18 dbA may be exceeded.
 - ☐ Public telephones with volume control shall be hearing aid compatible and identified by a sign containing a depiction of a telephone handset with radiating sound waves.



Text telephones:

(1140A.7)

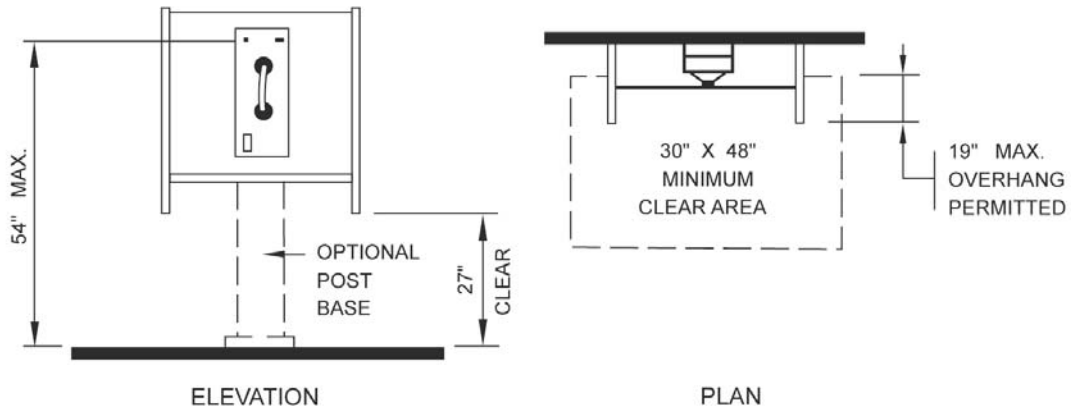
- ☐ If four or more public pay telephones are provided at the interior and exterior, and at least one is located in interior location, at least one interior text telephone shall be provided.
- ☐ Text telephones are identified by the International TTY symbol.
- ☐ If a facility has a public text telephone, directional signage indicating the location shall be placed adjacent to all banks of telephones that do not contain a text telephone.
- ☐ Such directional signage shall include the International TTY symbol.
- ☐ If a facility has no banks of telephones, the directional signage shall be provided at the entrance or in a building directory.
- ☐ Push-button controls, where service for such equipment is available, are required.
- ☐ The cord from the telephone to the handset is at least 29 inches long.
- ☐ If telephone books are provided, shall be located in a position that complies with the reach ranges in Figures 11A -1I & 11A-1J. (See pp. 36 & 37)

(1140A.9)

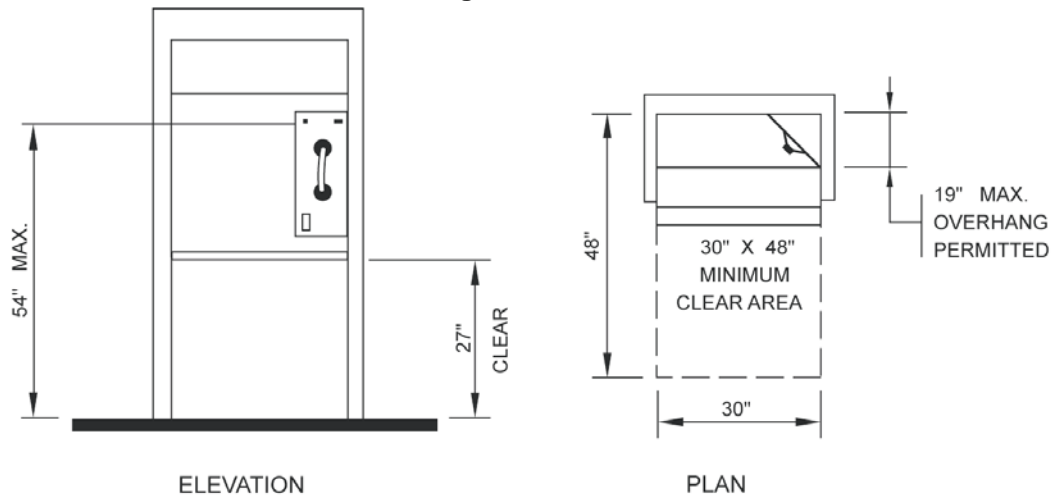
(1140A.10)



Side reach arrangement



Full height enclosure



Forward reach arrangement

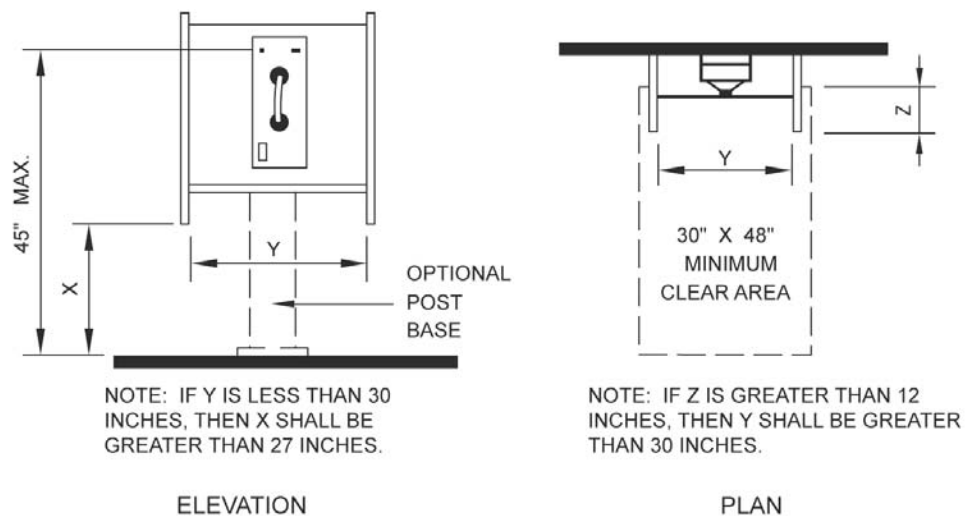


FIGURE 11A-11B

ACCESSIBLE SWIMMING POOLS (1141A)

- ☐ Swimming pool deck areas must be accessible; and
- ☐ Mechanism to assist persons with disabilities gain entry/exit into/from the pool is required.
- ☐ Such a mechanism may consist of a swimming pool lift device.

The lift device shall meet all of the following:

- ☐ Capable of unassisted operation from both the deck and water levels.
- ☐ Stable, not permitting unintended movement when a person is getting into/out of seat.
- ☐ Designed to have a live-load capacity of 300 pounds minimum.
- ☐ Position: if the pool has water of different depths, it will place the operator into water that is at least 3 feet deep.
- ☐ Capable of lowering the operator at least 18" below the surface of water.
- ☐ Has a rigid seat
- ☐ The seat must be 17"–19" (including any cushioned surface) above the pool deck; and
- ☐ Have a back support that is at least 12" tall; and
- ☐ An occupant restraint that meets the standards for operable controls.
- ☐ The seat must have two armrests.
- ☐ The armrest on the side of the seat by which access is gained shall be either removable or fold clear of the seat.

ELECTRICAL RECEPTACLE, SWITCH AND CONTROL HEIGHTS (1136A 1142A)

NOTE 1: The requirements for Electrical Receptacle, Switch and control heights are combined for convenience.

NOTE 2: Applicable for receptacle outlets on branch circuits of 30 amperes or less (including communication systems), controls/switches (for control of lighting and receptacle outlets, appliances, alarms or cooling, heating and ventilating equipment).

- ☐ Located 48" maximum measured from the finished floor (or working platform) to the top of the outlet box (receptacle, switch, control, etc.).
- ☐ 15" minimum measured from the finished floor/working platform to the bottom of the outlet box.

If the reach is over an obstruction, the maximum height shall be reduced: (See Figures 11A-1I & 11A-1J, pp. 36 & 37)

- ☐ **Forward approach:** obstruction between 20"-25", height reduced to 44" maximum.
- ☐ **Side approach:** obstruction 24" maximum, height reduced to 46" maximum.
- ☐ Obstructions shall not extend more than 25" from the wall beneath.
- ☐ Outlets not satisfying these specifications are acceptable provided that comparable outlets, that perform the same functions, are provided within the same area and are accessible.

Exceptions for receptacle outlets:

- ☐ Receptacle outlets installed as part of permanently installed baseboard heaters.
- ☐ Required receptacles permitted in floors when adjacent to sliding panels or walls.
- ☐ Baseboard electrical outlets used in relocatable partitions, window walls or other electrical convenience floor outlets are not subject to the height requirements.
- ☐ Existing buildings when the enforcing agency determines that compliance with these standards would create an unreasonable hardship.

Exception for switches and controls:

- ☐ Appliances (kitchen stoves, dishwashers, range hoods, microwave ovens, etc.) which have controls located on the appliance.

SIGNAGE (1143A)

Signs need not be provided within dwelling units:

- ☐ Characters, symbols and their background shall have a non glare finish.
- ☐ Characters/symbols shall contrast with their background (light on dark or dark on light).
- ☐ Characters have width-to-height ratio between 3:5 and 1:1; and
- ☐ Stroke width-to-height ratio between 1:5 and 1:10.
- ☐ Characters/numbers sized according to the viewing distance from which they are read.
- ☐ The minimum height is measured using an uppercase "X."
- ☐ Lowercase characters are permitted.
- ☐ 3" minimum height for signs suspended or projected more than 80" above finish floor.

When raised characters are required or pictorial symbols (pictograms) are used: (1143A.8)

- ☐ **Character Type.** Characters raised 1/32" minimum and shall be sans serif uppercase accompanied by Grade 2 Braille.
- ☐ **Character Size.** 5/8" minimum and 2" maximum high.
- ☐ **Pictorial Symbol Signs (Pictograms).** Accompanied by the verbal description placed directly below the pictogram. Outside dimension: 6" minimum high.
- ☐ **Character Placement.** Characters and Braille – in a horizontal format.
- ☐ Braille placed 3/8" minimum and 1/2" maximum directly below the tactile characters, flush left or centered.
- ☐ When tactile text is multilined, all Braille shall be placed together below all lines of tactile text.

Braille: (1143A.9)

- ☐ Contracted Grade 2 Braille wherever Braille is required.
- ☐ **Dots:** 1/10" o.c. in each cell with 2/10" space between cells, measured from the second column of dots in the first cell to the first column of dots in the second cell.
- ☐ Raised 1/40" minimum above the background.
- ☐ Domed or rounded.

Mounting location and height: (1143A.10)

- ☐ Permanent identification signs for rooms and spaces shall be installed on the wall adjacent to the latch side of the door.
- ☐ Signs placed on the nearest adjacent wall, preferably on the right, if there is no wall space on the latch side, including at double leaf doors.
- ☐ Permanent identification signage for rooms and spaces shall be located on the approach side of the door as one enters the room or space.
- ☐ Exit signs shall be located on the same side of the door as the visual exit sign.
- ☐ Mounting height – 60" above the finish floor to the centerline of the sign.
- ☐ Mounting location – a person may approach within 3" of the signage without encountering protruding objects or standing within the swing of a door.

